KENDRIYA VIDYALAYA SANGATHAN
GUWAHATI REGION

SPECIAL STUDY MODULE – ECONOMICS
FOR
CLASS – XII (2015-16)

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Unit I – INTRODUCTION

(Marks: 6)

1. **What is an Economy?**
   An economy is the system of earning livelihood. It is the sum of the basic economic activities viz.

2. **What is an economic problem?**
   An economic problem is the problem of making choice of the given resources which have alternative uses. In other words, it is the decision making problem of **husbandry of resources**.

3. **Why does an economic problem arise?**
   This problem arises due to the scarcity of resources which have alternative uses & the unlimited human wants.

4. **Explain PPC with the help of schedule and diagram.**
   It is a device which depicts the possible combination of producing any two goods with the given resources & the level of technology.

**PRODUCTION POSSIBILITY SCHEDULE**

<table>
<thead>
<tr>
<th>COMBINATIONS</th>
<th>PRODUCTION OF TRUCKS</th>
<th>PRODUCTION OF CARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>14</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>D</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>E</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>F</td>
<td>5</td>
<td>0</td>
</tr>
</tbody>
</table>

The Production Possibility Schedule reveals the tabular presentation of the PPC. Thus, if society needs to produce more of a commodity then it has to give up the production of other commodity. This is b’coz of the scarcity of resources and unlimited wants.

5. **Explain the Shift of PPC towards right showing growth of resources**
   In this figure we can see that the PPC ‘AF’ shift to the right as a new PPC “A’F’” which indicates the growth of available resources by the society, which makes it possible now to choose the points H & G.
6. Define opportunity cost.
Opportunity Cost refers to the cost of next best alternative foregone. In other words, it is the cost of sacrificing the production of a good to produce more of another good.

7. Define Marginal Opportunity Cost or MRT
It refers to the rate of sacrificing the production of a good to produce more of another good. It is the ratio of amount sacrifice of a good by the amount gained of another good.

8. What are the central problems of an economy?
   i) What to Produce?
   ii) How to Produce?
   iii) For Whom to Produce?

   i) “What to produce” refers to the choice of production by the society for that good to be produced which is in actual need of the society. For instance, during peace time, the society can avoid producing Guns and can utilize more of the resources to produce other good which is actually needed by the society (say Trucks).

   ii) “How to produce” is related to the choice of the technique to produce the goods & services. The society need to make a choice between labour intensive and capital intensive technique of production.

   iii) “For whom to Produce” is another problem which needs to be focused for the equal distribution of the resources for the benefits of large so as to reduce unequal distribution of the resources and create an egalitarian society.

9. Why does it arise?
B’coz of scarcity of resources in relation to their demand.

10. Define micro economics & macro economics.
It is that branch of Economics which deals with individual units of an economy or small units of an economy. The term ‘Micro’ is derived from Greek term ‘Mikros’ which means ‘small’ while macro economics is that branch of Economics which studies the aggregates of an economy. It is also called as aggregative Economics. This term is derived from the Greek term ‘Makros’ which means ‘large’.

**Very short answer questions carrying 1 mark each:**

1. What is microeconomics?
Ans. Micro economics studies economic problems and economic issues relating to small economic units (like consumers and producers).

2. Define scarcity.
Ans. Scarcity is a situation when demand for a thing exceeds its supply even at a zero price.

5. Mention the main cause which gives rise to economic problems.
Ans. Limited resources with alternative uses to meet unlimited wants are the main cause which gives rise to economic problems.

6. Why does an economic problem arise?
Ans. An economic problem arises due to unlimited wants and limited resources which have alternative uses.

7. What is a production possibility curve?
Ans. Production Possibility Curve shows all possibilities of production of two goods, when technologies and supplies of resources available to an economy are given and they are efficiently used.
Short answer questions carrying 3 marks:

1. Define the production possibility curve. Draw the production possibility curve and explain its shape.

Ans. Production possibility curve shows various combinations of the two goods that can be produced with available technologies and with given resources, which are fully and efficiently employed.

In the diagram shown below PPC shows the maximum amount that can be produced of one good, given the amount produced of the other good. PPC is downward sloping because more production of one good is associated with less of the other.

2. Draw PPC and show the situation of

(a) Underemployment

(b) Full employment and

(c) Growth of resources.

3. Why does the PPC look concave to the origin?

Along a PPC more production of one good means some sacrifice of the other good. The rate of this sacrifice is called the marginal opportunity cost. As more and more of a good are produced, factors producing it become marginally less and less productive. As a result more and more of the other good has to be sacrificed for increasing the production of the former good. PPC is concave to the origin because of increasing marginal opportunity cost.

4. Calculate the marginal opportunity cost of Bats

Production of Cricket Bat (in thousands): 0 1 2 3 4 5
Production of Sarees (in lakhs): 75 70 62 50 30 0

5. From the following table, calculate the marginal opportunity cost of X:

<table>
<thead>
<tr>
<th>X</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>90</td>
<td>80</td>
<td>67</td>
<td>51</td>
<td>32</td>
<td>9</td>
</tr>
</tbody>
</table>

**************************
UNIT II: CONSUMER BEHAVIOUR & DEMAND

(MARKS 18)

1. What is Demand?
Demand for a commodity refers to willingness and ability of a consumer to purchase a good at a given price and at a given unit of time. By the term demand we mean the quantity of a good which a consumer purchases at a given price and at a given unit of time.

2. What is Demand Function? Demand function is an expression which establishes a precise functional relationship between the demand for a good and its various determinants i.e. Qdx = f (Px, Py, Y, T…)

3. Explain briefly the determinants of Demand i.e. the factors which affect the demand for a good
- Price of other related good (Py) is also one of the determinant of the demand for a good. The change in the price of a good (say Tea) may bring the change in the demand for other good (say, Coffee or Milk). In case of a substitute good, the rise in the price of good X (say Tea) will lead to the increase in the demand for the good Y(say Coffee), and vice versa. Thus the change in both is directly related. In case of a complementary good, the price rise in one good (say Car) may lead to the decrease in the demand for the related good (say Petrol), & vice versa. Thus, both this are negatively related.
- Income of the consumer (Y): The change in income of a consumer may lead to the change in demand for a good, and vice versa. Incase of a normal good, the rise in income leads to rise in its demand because the purchasing power of the consumer will rise with the rise in income, and vice versa. On the other hand, the rise in income leads to decrease in demand for an inferior good.
- The change in Taste, habit and fashion also has the direct influence on the demand for a good. For e.g. the taste for using Addjel pens is on rise these days by the students. B’coz of this, the demand for this kind of pens is also rising.
- The size of population or a family also determines the demand for a good. The increase in the size of a family may lead to the rise in the demand for a good. For e.g. if a man gets married then obviously the no. of members in his family will increase. This will lead to the rise in the demand for milk & other essential goods.
- Weather & climatic conditions may also have the influence upon the demand for a good. A poor weather condition may lead to fall in demand for a certain good, and vice versa. For e.g. too hot climate may raise the demand for cold drinks.

4. State the law of demand.
“While other things remaining same, the demand for a good rises with the fall in its price, and vice versa.” Thus this law tells us that there is an inverse relationship between both the price of a good and its demand.

5. Define Demand schedule & demand curve.
It refers to a tabular presentation of the relationship between price of a good and its demand, while Demand curve is the graphical representation of the demand schedule.
6. **What are Giffen goods or Inferior goods?**
These are those goods whose demand rises with the fall in income and vice versa. Some of the inferior goods are bajra, wet rice, maize etc.

7. **Define Substitute goods & complementary goods.**
*Substitute goods* can be defined as those goods which can be in use in place of other goods. In other words, the fall in the price of these goods lead to the rise in the demand for the other substitute good. For e.g. the Tea & coffee, pen & pencil etc. *Complementary goods* refer to those goods which are used together or those goods which are demanded together. The fall in the price of a complementary good leads to the rise in demand for the other good. For eg., pen & ink, car & petrol etc.

8. **Define Price Elasticity of Demand.**
*Price elasticity of demand* can be defined as the measure/degree of responsiveness in the change in demand for a good due to the change in its price.

9. **Show how to calculate price elasticity of demand.**

\[
\text{Coefficient of price elasticity of demand (Ep)} = \frac{\text{Percentage change in qty. demanded}}{\text{Percentage change in its price}}
\]

\[
\text{Ep} = \frac{\Delta q}{q} \times \frac{100}{\Delta p} \times \frac{100}{p}
\]

10. **What are the Degrees of price elasticity of demand according to Percentage Method? Show with the diagram.**

1. Unitary elastic demand (Ep=1);
2. Relatively elastic demand (Ep>1);
3. Relatively Inelastic demand (Ep<1);
4. Perfectly Inelastic demand (Ep=0);
5. Perfectly elastic demand (Ep=\infty).
10. **Explain total expenditure method with the help of an example.**
   This method is based on the total expenditure incurred on the good by the consumer. In this method, the $e_p$ is measured by measuring the change in total expenditure on the good due to change in its price.

   1. **Inelastic demand ($e_p<1$)**: the total expenditure rises due to rise in its price, and vice versa. 2. **Unitary elastic demand ($e_p=1$)**: In this case, the total expenditure does not change with the change in the price of the good. 3. **Elastic demand ($e_p>1$)**: In this case, the total expenditure rises with the fall in the price of the good, and vice versa.

   This method can be explained by the help of the following illustration:

<table>
<thead>
<tr>
<th>P</th>
<th>TE</th>
<th>$e_p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>200</td>
<td>$e_p&lt;1$</td>
</tr>
<tr>
<td>3</td>
<td>300</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>400</td>
<td>$e_p=1$</td>
</tr>
<tr>
<td>6</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>300</td>
<td>$e_p&gt;1$</td>
</tr>
<tr>
<td>8</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

11. **Explain the Geometrical / Diagrammatic or Point elasticity method of price elasticity of demand.**
   In this method, the $e_p$ is measured on various points plotted on the demand curve.

   **Lower segment**
   
   $E_p = \frac{CE}{CA} = \frac{3Cm}{3Cm} = 1$; so, the demand is unitary elastic at point C.

   **Upper segment**

   $E_p = \frac{BE}{BA} = \frac{5Cm}{1Cm} = 5$; so, the demand at point B is more elastic i.e. $e_p>1$

   $E_p = \frac{AE}{AS} = \frac{6Cm}{0Cm} = \infty$. Thus, the demand at point A is perfectly elastic i.e. $e_p = \infty$

   $E_p = \frac{DE}{DA} = \frac{1Cm}{5Cm} = 0.2$

   Thus, $e_p$ at point D is less elastic ($e_p<1$)

   The elasticity at point E = $EF/EA = 0cm/6cm = 0$; Thus, elasticity of demand at point E is perfectly inelastic i.e. $e_p=0$

12. **Explain the determinants or factors influence the price elasticity of demand for a good.**
   1. **Nature of a good**: The demands for the goods, which are most essential for human survival or to satisfy the basic needs, are inelastic in demand, because the consumers are compelled to buy these goods without getting bothered about the changes in their price. 2. **Proportion of income spent**: The goods on which we spend smaller proportion of our income are inelastic in demand, b’coz the consumers do not bother about the change in their price.

   3. **Several uses of the good**: The goods which have several uses like electricity, coal etc. have elastic demand as the rise in their price will compel the consumers to limit the use of these goods.
4. **Future expectation of change in price:** If there is an expectation of change in price, the demand for a good is either less responsive.

5. **Price level:** The dearer goods will have elastic demand while the cheaper goods will have inelastic demand.

6. **Postponement of purchase:** Those goods whose purchase can be postponed are elastic in demand b’coz these goods can be purchased in the future time as these are not very essential for the human survival.

13. **Define Consumer Equilibrium**

Consumer equilibrium refers to such a situation when a consumer maximizes her satisfaction out of her given money income and the price of the desired good(s).

14. **What are the conditions of consumer equilibrium?**

In case of one good: \( \frac{\text{MU}_x}{P_x} = \text{MUm} \) or \( \frac{\text{MU}_x}{\text{MUm}} = P_x \)

\[ \text{MU}_x = P_x \]

15. **Define Marginal Utility of money.**

It refers to the marginal utility of money income which means the utility derived from spending the additional / extra unit of money on the desired good by the consumer.

16. What is the condition of consumer equilibrium in case of more than one good? Explain with the help of illustration.

In case of more than one good: The ratio of MU and price of all the desired goods are equal to each other, and finally these ratios are equal to MUm. This can be expressed as:

\[
\begin{align*}
\frac{\text{MU}_x}{P_x} &= \frac{\text{MU}_y}{P_y} = \frac{\text{MU}_z}{P_z} = \frac{\text{MUn}}{P_n} = \text{MUm}
\end{align*}
\]

**Illustration:** “Given the market price of a good as Rs 4, how does a consumer decide to purchase a good?” shall depend upon the point where the consumer maximize her satisfaction and do not tend to purchase the good at that point of time.

<table>
<thead>
<tr>
<th>Units</th>
<th>TU</th>
<th>MU</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>14</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>24</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>32</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>38</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>42</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>6</td>
<td>44</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>44</td>
<td>0</td>
<td>4</td>
</tr>
</tbody>
</table>

From this table we see that the consumer will purchase 5 units of the good because the price is equal to MU, and will not like to purchase more than 5 units because the price of the good is greater than the satisfaction derived from the extra unit of the good (MU). When the consumer purchases 1\text{st} unit, MU exceeds the price, and therefore she purchases the 2\text{nd} unit at which the MU still exceeds the Price and again she purchases the 3\text{rd} unit. This goes on till the MU is equal to price of the good. Thus we see that the consumer attains equilibrium at that point when the MU = P.
17. **State the Law of Diminishing Marginal Utility. Explain with the help of an illustration.**

The law states that, “as a consumer goes on consuming more & more units of a good, less & less she wants to have more of it, ceteris paribus”.

<table>
<thead>
<tr>
<th>Units Consumed</th>
<th>TUx (In Utils)</th>
<th>MUx (in Utils)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>34</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>43</td>
<td>9</td>
</tr>
<tr>
<td>4</td>
<td>48</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>0</td>
</tr>
<tr>
<td>7</td>
<td>48</td>
<td>-2</td>
</tr>
<tr>
<td>8</td>
<td>43</td>
<td>-5</td>
</tr>
</tbody>
</table>

17. **Differentiate change in demand and change in qty demanded.**

By change in qty. demanded we mean the change in demand for a good due to the change in the price of the good, while other factors remain same.

The rise in demand, in this case is called as extension in demand, while fall in demand is called as contraction in demand. In this case, the demand curve will move along the same curve towards right in case of extension in demand; and left in case of contraction of demand. In the case of extension in demand, more qty. will be demanded at lower price, and less qty. at higher price in the case of contraction of demand.
Question Bank

Very short questions carrying 1 mark each.

1. What do you mean by consumer’s equilibrium in case of two commodities?
2. Mention any two determinants of demand other than price.
3. Why does consumer buy more of a commodity at a given price?
4. Why does consumer buy less of a commodity at a given price?
5. What do you understand by substitute goods?
6. Define inferior goods.
7. Define complementary goods.
9. If the demand for goods Y increases as the price of another goods X rises, how are two goods related?
10. If the quantity demanded of a commodity X decreases as the household income increases, what type of goods is X?
11. What happens to the demand for a commodity, if the price of its substitute falls?
12. What will happen to the demand for a commodity, if the price of its complementary goods changes?
13. Give the meaning of normal goods and inferior goods.
14. State any one factor that causes an increase in the demand for a commodity.
15. Define demand schedule.
17. What is unit elastic demand?
18. When is the demand called elastic?
19. When is the demand called inelastic?
20. Why is price elasticity of demand always negative?
Short Answer Type Questions Carrying 3-4 marks.

2. What is meant by consumer’s equilibrium? State its condition in case of a single commodity.
3. ‘X’ and ‘Y’ are substitute goods. Explain the effect of a fall in the price of X on the demand of Y.
4. State the total expenditure method of measuring price elasticity of demand of a commodity.
5. Explain the effect of rise in the prices of related goods on the demand of a good.
6. State any three/four causes of increase in demand.
7. State any four causes of decrease in demand.
8. Define demand and explain factors affecting demand.
10. Distinguish between expansion in demand and increase in demand.
11. Explain the factors that affect the market demand of a commodity.
12. With the help of suitable illustration bring out the difference between contraction and decrease in demand.
13. Explain the reason for the inverse relationship between the price of a commodity and the quantity demanded of it.
14. How is the demand of a commodity affected by a fall in the price of other commodity? Explain.
15. Explain the Law of demand with the help of schedule and diagram.
16. State any three causes of rightward shift of demand curve.
17. State any three causes of leftward shift of demand curve.
18. Draw the demand curves when:
   a) $ed = 0$
   b) $ed = \infty$
   c) $ed = 1$
19. What do you understand by price elasticity of demand? State the factors that influence it.
20. Explain briefly three factors determining price elasticity of demand.
21. Discuss the Point Method of measuring price elasticity of demand.
22. Discuss the Percentage Method of measuring price elasticity of demand.
23. Draw the demand curves when:
   a) $ed = 1,$
   b) $ed > 1,$
   c) $ed < 1.$

Numericals

24. When price of a good falls by 10 percent, its quantity demand rises from 40 units to 50 units. Calculate price elasticity of demand by percentage method.
25. Price of a good falls from Rs.6 to Rs.3 per unit. As a result its demand rises by 50 percent. Find out price elasticity of demand.
26. A consumer buys 20 units of a good at Rs.10 per unit. When its price falls by 10% its demand rises by 15%. Find out ed and state the nature of elasticity.
27. A consumer buys 50 units of a good at a price of Rs.10 per unit. When price falls to Rs.5 per unit he buys 100 units. Find out ed by total expenditure method.
28. When the price of a commodity is Rs.5 per unit, the expenditure over it is Rs.500. Due to increase in its price to Rs.6 per unit the expenditure on it decreases to Rs.450. Find out ed by percentage method.
29. The co-efficient of priced of a commodity is 0.5. When its price is Rs.10 per unit, its quantity demanded is 40 units. If the price falls to Rs.5 per unit, how much will be its quantity demanded?
30. Price elasticity of demand of a good is (-)1. 60 units of this good is demanded at price Rs.8 per unit. At what price will 45 units be brought?

Unit III

PRODUCTION FUNCTION (Marks: 18)

1. Define a production function.
   Ans. Production function is defined as a technological relationship that tells the maximum output that can be produced from various combinations of inputs.
2. Define total product or total physical product (TPP).
   Ans. TPP is the total output at a particular level of employment of an input when employment of all other inputs is changed.
3. Define marginal product or marginal physical product (MPP).
   Ans. This is defined as the increase in total physical product per unit increase in the employment of an input when employment of other input is given.
   \[ \text{MPP}_n = \text{TPP}_n - \text{TPP}_{n-1} \]

   Ans. MPP first increases with an increase in the employment of the input in question, then it diminishes and finally it becomes negative. This pattern of MPP is called the law of variable proportion.

5. What do mean by fixed factors?
   Ans. Fixed factors refer to those factors which can’t be changed in short run.

6. If TPP is falling, what can you say about MPP?
   Ans. MPP is negative.

7. If TPP is increasing at a decreasing rate, what can you say about MPP?
   Ans. MPP is falling but is positive.

8. If TPP is increasing at an increasing rate, what can you say about MPP?
   Ans. MPP is rising.

9. If APP is falling, what can you say about MPP?
   Ans. If APP is falling, MPP is also falling and is less

10. What is law of variable proportion with the help schedule and diagram.
    Ans THE LAW OF DIMINISHING MARGINAL PRODUCT AND
    THE LAW OF VARIABLE PROPORTIONS

   The law of variable proportions, also known as the Law of Diminishing returns can be stated as follows: When total output of a commodity is increased by adding units of a variable input while the quantities of other inputs are held constant, the increase in total production becomes smaller and smaller. It can be explained with the help of a following schedule.

<table>
<thead>
<tr>
<th>Land fixed factor (in acres)</th>
<th>Labour variable factor (in units)</th>
<th>Total Product</th>
<th>Marginal Product</th>
<th>Returns to variable factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>Increasing returns</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>7</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>12</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>16</td>
<td>4</td>
<td>Diminishing returns</td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>19</td>
<td>3</td>
<td>returns</td>
</tr>
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<td>6</td>
<td>19</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>17</td>
<td>-2</td>
<td>Negative returns</td>
</tr>
</tbody>
</table>

Figure showing behaviour of total product, average product and marginal product
FIRST STAGE: At this stage TP increases at an increasing rate and MP also increases. AP is the maximum. This stage is also known as the stage of increasing returns.

SECOND STAGE: At this stage TP continues to increase but at a diminishing rate. This stage goes to the point when TP reaches the maximum and MP becomes zero. Both AP and MP decline but remain positive. This is known as stage of diminishing returns.

THIRD STAGE: At this stage TP starts declining and MP becomes negative. At this stage the total output, average output and marginal output all decline. This stage is also known as stage of negative returns.

11. **Calculate APPs and MPPs of a factor from the following table.**

<table>
<thead>
<tr>
<th>Level of factor</th>
<th>TPP</th>
<th>APP</th>
<th>MPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
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<td>6.6</td>
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<tr>
<td>6</td>
<td>6.6</td>
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<tr>
<td>7</td>
<td>6</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

12. The following table gives the MPPs of a factor. It is also known that the TPP at zero level of employment is zero. Determine its TPP and APP Schedules.

<table>
<thead>
<tr>
<th>Level of factor</th>
<th>MPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>16</td>
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<tr>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level of Factor</th>
<th>TPP</th>
<th>APP</th>
<th>MPP</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1</td>
<td>20</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>42</td>
<td>21</td>
<td>22</td>
</tr>
<tr>
<td>3</td>
<td>60</td>
<td>20</td>
<td>18</td>
</tr>
<tr>
<td>4</td>
<td>76</td>
<td>19</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>96</td>
<td>16</td>
<td>6</td>
</tr>
</tbody>
</table>

**COST**

1. **What are fixed costs?**

Ans. Fixed costs are those which do not change when output is increased or decrease. They have to be incurred even if output is Zero.

2. **What are variable costs?**

Ans. Variable costs are those costs which vary with output.

3. **Give two examples of fixed costs.**

Ans. Rent of Land, Insurance charges are examples of fixed cost.

4. **Give two examples of variable costs.**

Ans. Cost of raw material used in production, wages paid to labour employed are examples of variable cost.

5. **What is meant by marginal cost?**

Ans. Marginal costs are additions made to the total cost by the production of an additional unit of the commodity. MC = TCn – TCn-1

Marginal cost can also be defined as rate of change of total cost with respect to output.

6. **What is the reason behind the U – shape of the MC curve?**

Ans. The reason behind the U shape of the MC curve is the law of diminishing returns.

7. **Can AFC curve meet the X axis?**

Ans. No.

8. **Classify the following fixed costs and variable costs.**
a) Rent for a shed. Ans. Fixed cost.
b) Minimum Telephone Bill Ans. Fixed cost.
c) Cost of raw materials Ans. Variable cost.
d) Daily wages Ans. Variable cost.
f) Interest on Capital Ans. Fixed cost.
g) Telephone charges beyond minimum Ans. Variable cost.
h) Wages to permanent staff Ans. Fixed cost.

19. Is there any change in the TFC when output changes in the short period?
Ans. Total Fixed Cost remains constant.

9 What does division of labour mean?
Ans. It means allocation of tasks among workers according to their specialization.

10. Can AFC curve meet the X axis?
Ans. No.

11. What is the general shape of AFC curve?
Ans. Rectangular Hyperbola. AFC curve slopes downwards.

12. Can AC be less than MC when AC is rising?
Ans. Yes.

13 At what point of AC curve, MC curve cuts it?
Ans. Minimum point.

14. How is TVC derived from MC?
Ans. TVC is the sum of MCs.

15. How is MC derived from TVC?
Ans. MC is the addition to TVC when an additional unit is produced.

16. A firm is producing 20 units. At this level of output, the ATC and AVC are respectively equal to Rs. 40 and Rs. 37. Find out total fixed cost of the Firm?
Ans. Units of Output Produced ATC AVC AFC TFC
20 40 37 3 60

17. Can TFC be Zero, when output is Zero?
Ans. No.

18. Suppose TFC is Rs. 120, find out TC, TVC and MC from the following data.
Output (in Units): 1 2 3 4 5
ATC: 240 160 140 160 180
Ans.

<table>
<thead>
<tr>
<th>Output (in Units)</th>
<th>TFC</th>
<th>TVC</th>
<th>AFC</th>
<th>AVC</th>
<th>ATC</th>
<th>TC</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>240</td>
<td>240</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>120</td>
<td>200</td>
<td>60</td>
<td>100</td>
<td>160</td>
<td>320</td>
<td>80</td>
</tr>
<tr>
<td>3</td>
<td>120</td>
<td>300</td>
<td>40</td>
<td>100</td>
<td>140</td>
<td>420</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>120</td>
<td>520</td>
<td>30</td>
<td>130</td>
<td>160</td>
<td>640</td>
<td>220</td>
</tr>
<tr>
<td>5</td>
<td>120</td>
<td>780</td>
<td>24</td>
<td>156</td>
<td>180</td>
<td>900</td>
<td>260</td>
</tr>
</tbody>
</table>

19. From the data given below, calculate AFC, AVC and MC.
Output (in Units): 0 1 2 3 4 5
TC (in Rs.): 40 100 120 130 150 190
Ans.

<table>
<thead>
<tr>
<th>Output (in Units)</th>
<th>TC</th>
<th>TFC</th>
<th>TVC</th>
<th>AFC</th>
<th>AVC</th>
<th>MC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>40</td>
<td>0</td>
<td>--</td>
<td>0</td>
<td>--</td>
</tr>
<tr>
<td>1</td>
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</tr>
<tr>
<td>3</td>
<td>130</td>
<td>40</td>
<td>90</td>
<td>13.3</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>150</td>
<td>40</td>
<td>110</td>
<td>10</td>
<td>27.5</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>190</td>
<td>40</td>
<td>150</td>
<td>8</td>
<td>30</td>
<td>40</td>
</tr>
</tbody>
</table>

20. Firm’s total cost schedule is given in the following table. Find output AFC, ATC and MC schedules.
Output (in Units): 0 1 2 3 4 5 6 7 8
TC (in Rs.): 40 120 170 180 210 260 340 440 550
### FORMULAE

<table>
<thead>
<tr>
<th>Output (in units)</th>
<th>TC (in Rs)</th>
<th>TFC (in Rs)</th>
<th>TVC (in Rs)</th>
<th>AFC (in Rs)</th>
<th>AVC (in Rs)</th>
<th>ATC (in Rs)</th>
<th>MC (in Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>40</td>
<td>40</td>
<td>0</td>
<td>0</td>
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<tr>
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<td>120</td>
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<td>2</td>
<td>170</td>
<td>40</td>
<td>130</td>
<td>20</td>
<td>30</td>
<td>30</td>
<td>50</td>
</tr>
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<td>3</td>
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<td>140</td>
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<td>42.5</td>
<td>42.5</td>
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<tr>
<td>4</td>
<td>210</td>
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<td>42.5</td>
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<td>5</td>
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<td>220</td>
<td>8</td>
<td>44</td>
<td>44</td>
<td>50</td>
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<td>6</td>
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<tr>
<td>7</td>
<td>440</td>
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<td>400</td>
<td>5.7</td>
<td>57.1</td>
<td>57.1</td>
<td>80</td>
</tr>
<tr>
<td>8</td>
<td>550</td>
<td>40</td>
<td>510</td>
<td>5</td>
<td>63.75</td>
<td>63.75</td>
<td>100</td>
</tr>
</tbody>
</table>

- **TC = TFC + TVC**
- **AC = AFC + AVC**
- **AFC = TFC/Q**
- **AVC = TVC/Q**
- **TFC = AFC X Units of Output**
- **TC = AC X Q**
- **TVC = AVC X Units of Output**
- **AC = TC/Q**

### 21. What are the relationship between AVC and MC Curves?

**Ans. RELATIONSHIP BETWEEN AVC and MC CURVES**

1) **MC lies below the AVC curve (i.e., MC < AVC)**
   - AVC slopes downwards
2) **When AVC is minimum or constant AVC = MC**
   - It means MC curve cuts the AVC curve at the latter’s minimum point.
3) **MC lies above the AVC (i.e., MC > AVC)**
   - AVC starts sloping upwards.

By definition, MC is the addition to both TVC and TC. Hence, the relationship between MC and ATC (AC) is same as the relationship between MC and AVC.

1) **When AC is falling, MC < AC, AC falls.**
2) **When Ac is minimum, MC = AC. Ac constant, it means MC curve cuts AC curve at the latter’s minimum point.**
3) **When AC is increasing, MC > AC, AC rises.**

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### REVENUE

1. **What is meant by revenue?**
   - Ans, Revenue is the money receipts of a firm from the sale of its output.

2. **Define total revenue.**
   - Ans Total revenue is the sum of money receipts of a firm from the sale of its total output.
   
   \[ TR = P \times Q \]

3. **What is average revenue?**
   - Ans. Average revenue is the revenue per unit sold.
   
   \[ AR = TR/Q \]

4. **Define marginal revenue.**
   - Ans. Marginal revenue is the net addition to the total revenue by selling one more unit of output.
   
   \[ MR_n = TR_n \ - \ TR_{n-1} \]

5. **What is the relationship between TR, AR and MR under perfect competition?**
   - **Total Revenue:** Total money receipt by the sale of total output by the firm is known as total revenue. \( TR = P \times Q \).
   - **Average Revenue:** Average revenue is the revenue per unit of output. \( AR = TR/Q \).
Marginal Revenue: Marginal Revenue is the net addition to the total revenue by the sale of one more unit. \( MR_n = TR_n - TR_{n-1} \)

**Relationship between AR & MR in perfect competition**: As the price of the good remain same, therefore the AR curve takes the form of a straight horizontal line & MR curve also coincides on it. This implies that AR & MR is equal to each other in perfect market situation.

<table>
<thead>
<tr>
<th>Units sold</th>
<th>TR (Rs.)</th>
<th>AR (Rs.)</th>
<th>MR (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
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<td>3</td>
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<tr>
<td>5</td>
<td>50</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

*Ans*: AR & MR in an imperfect market

market situation, where the price of the good differs due to less no. of firms, & the firms produce & sell heterogeneous product, the MR curve falls & rises rapidly than the AR curve i.e. when AR falls the

**Producer’s equilibrium**

1. **What is meant by producer’s equilibrium?**
   Ans. Producer’s equilibrium is that level of output at which producer achieves maximum profit.

2. **What is the condition of producer’s equilibrium for a competitive firm?**
   Ans. The condition of producer’s equilibrium for a competitive firm is \( P = MC \)

3. **What is the general profit maximizing condition of a firm?**
   Ans. The general profit maximizing condition of a firm is \( MR = MC \).


**PRODUCER EQUILIBRIUM/ EQUILIBRIUM OF A FIRM**: It refers to such a situation or that level of output with an enterprise when it maximize its profits or minimize its loss out of its given scale of production & has no motive to expand or contract the level of output without changing the existing scale of production i.e. when the firm produces positive output.

1. **The Marginal Cost (MC) of the firm must be equal to its Marginal Revenue (MR).**

   The firm attains equilibrium when its MC is equal to its MR. It is an essential condition b’coz when MC<MR, the firm still expects to get more profits; & when MC>MR, the firm gets loss as it spends more than what it earns from the extra unit.
2. The Marginal Cost (MC) must be less than Marginal Revenue (MR) before the equilibrium point & MC must be greater than MR after the equilibrium point.

MC must intersect MR from below but not from above. If the MC intersects from above of the MC curve i.e. MC>MR, then it implies that the firm was already facing loss & further production will accrue profits to the firm. Moreover, the question of maximizing profits does not arise as the firm was getting losses on the production of previous units of the good.

**SUPPLY**

1. What is meant by the law of supply?
   Ans. Law of supply is a law which states that other things remaining the same as price rises, quantity supplied rises and as price falls, quantity supplied falls.

2. What is a supply schedule?
   Ans. Supply schedule is a tabular statement which indicates different quantities of a commodity supplied at different prices in a given period of time.

3. What is a supply curve?
   Ans. Supply curve is a curve showing the positive relationship between price and quantity supplied.

4. Mention the determinants of the supply curve.
   Ans. The determinants of the supply curve are technological changes, Input price changes, changes in the excise tax rate, and changes in the prices of related products.

5. How is the market supply curve derived from the individual supply curve?
   Ans. The market supply curve is derived from the horizontal summation of the individual supply curves.

6. What is the price elasticity of supply?
   Ans. Price elasticity of supply is the degree of responsiveness of quantity supplied to changes in price or it is the proportionate change in quantity supplied due to the proportionate change in price.

7. Which are the various methods of measuring price elasticity of supply?
   Ans. The various methods of measuring price elasticity of supply are percentage method and Geometric method.

8. Distinguish between contraction of supply and decrease in supply.
   Ans.
   Contraction of supply
   1) Other things remaining the same when supply of a commodity falls due to fall in its price, it is called Contraction of supply
   2) Contraction of supply involves a downward movement along the same supply curve.

   Decrease in supply
   Price remaining the same when supply of a commodity falls due to other factors, it is called decrease in supply
   Decrease in supply involves a leftward shift of the supply curve.

<table>
<thead>
<tr>
<th>P</th>
<th>Qty supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>100</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P</th>
<th>Qty supplied</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>50</td>
<td>30</td>
</tr>
</tbody>
</table>
9. Distinguish between expansion of supply and increase in supply.

Ans.

**Expansion Vs Increase in Supply**

<table>
<thead>
<tr>
<th>EXPANSION IN SUPPLY</th>
<th>INCREASE IN SUPPLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>It means the rise in supply due to the rise in its price while other factors remaining same.</td>
<td>It means rise in supply due to the change in other factors while price of the good remaining same.</td>
</tr>
<tr>
<td>In this case, the supply curve moves along the same curve to upwards or right.</td>
<td>In this case, the supply curve shifts towards right.</td>
</tr>
<tr>
<td>In this type of situation, more qty. is supplied at higher price.</td>
<td>In this type of situation, more qty. is sold at same price or same qty. at lower price.</td>
</tr>
<tr>
<td>The source of change in supply is only the change in price of the good.</td>
<td>The sources of increase in supply are change in the price of other related goods; technology &amp; innovation; price of inputs; change in goals of the firm; change in govt. policy; natural factors etc.</td>
</tr>
</tbody>
</table>

10. If the market price of a commodity is Rs. 4, a seller is willing to sell 600 units of the commodity. When the price rises to Rs. 5, he is willing to sell 850 units of the commodity. What is the seller’s elasticity of supply?

Ans. \( E_s = \frac{\Delta Q}{\Delta P} \cdot \frac{P}{Q} \)

\( P = Rs. 4, \quad P_1 = Rs. 5, \)

\( Q = 600, \quad Q_1 = 850, \quad Q_0 = 850 \)

\( E_s = \frac{250 \times 4}{1 \times 600} = 1.67 \)

Elasticity of supply is more than unity.
11. The coefficient of elasticity of supply of commodity is 3. A seller supplies 20 units of this commodity at a price of Rs. 8 per unit. How much quantity of this commodity will the seller supply when the price rises by Rs. 2 per unit?

Ans. Suppose the seller will supply X unit of commodity.

\[ e_s = \frac{\Delta Q}{\Delta P} \times \frac{P}{Q} \]

\[ P = Rs. 8, \quad P_1 = Rs. 10, \quad \Delta P = Rs. 2 \]

\[ Q = 20, \quad Q_1 = X, \quad \Delta Q = X - 20 \]

\[ e_s = 3 \]

\[ 3 = \frac{X - 20}{2} \times \frac{8}{20} = \frac{X - 20}{5} \]

\[ 3 = \frac{X - 20}{5} \]

\[ 15 = X - 20 \]

\[ 15 + 20 = X \]

\[ X = 35 \]

12. Using diagrams explain the various degree of price elasticity of supply.

Ans. i) Perfect elastic supply: When a negligible change in price brings considerable or infinite change in quantity. In this case the supply curve is parallel to OY axis. \( E_s = \infty \)

![Diagram of perfect elastic supply](image)

ii) Perfectly inelastic supply: When the quantity supplied remains unchanged whatever the price may be. Here, the supply curve is parallel to OY axis. \( E_s = 0 \)

![Diagram of perfectly inelastic supply](image)

UNIT IV: FORMS OF MARKET AND PRICE DETERMINATION (12 marks)

1. Define market.

Ans. Market: In economics, market is used as a broader term, which refers to a medium through which buyers & sellers interact with each other – may be directly or indirectly – in order to exchange the commodities at certain price.

2. Give features of perfect competition?

Ans. Perfect Competition Market: It refers to such a market structure in which the firms are price takers due to the existence of large number of buyers & firms, and the products are homogenous in character due to which the price of the good remain same.
Characteristics or Features or Conditions of the perfect competition market
1. Existence of large number of buyers and sellers is one of the most important features of this market which leads to a perfectly competitive market environment, and thus, no single buyer or seller can influence the market. That is why the price of the good remains same at all levels of output.
2. Firms produce & sell homogenous products, which is also an important condition of this market. By homogenous product we mean the goods which are similar & identical. This enables the market to be more competitive and the firms remain price-taker.
3. Free entry & exit of the firms is also one of the most important features of the market, as there is no artificial restriction for the firms to make entry as well as exit. The emergence of abnormal profits attracts the firms to enter and the firms can exit from the market if they incur loss. This feature induces the competitive environment, and thus, the firms earn only normal profits in the long run.
4. Perfect knowledge about the market by the buyers & sellers is another feature of this market. Both the buyers & sellers have the knowledge about the market price of the good and the availability of the firms who are dealing with this good in the market. Thus the question of price discrimination does not arise.
5. Perfect mobility of the goods & factors of production is also considered as one of the condition of this market. The immobility of goods & factors lead to price discrimination, and thus perfect mobility ensures the price to be same at all levels of output. Due to this feature, there arises no scarcity in the supply of goods, & thus, the single seller or buyer cannot influence the market.
6. Absence of transportation cost is another feature which is assumed to be in this market. This enables the price to be same. It is assumed that no transportation cost is incurred or the firms pay same amount of transport cost so as to make the analysis easy.

3. Di fference between Monopoly Market Vs. Monopolistic Competetion Market?

<table>
<thead>
<tr>
<th>Monopoly Market</th>
<th>Monopolistic Competition Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In this case, there is existence of single firm which has no close competitor, &amp; the firm produce &amp; sell unique product which has no close substitute in the market.</td>
<td>1. In this case, a large number of firms exist in the market which produce &amp; sell heterogenous product, &amp; thus, there is availability of close substitute of the product.</td>
</tr>
<tr>
<td>2. There is no prevalence of selling cost, as it is not required.</td>
<td>2. Prevalence of selling cost is the most prominent feature of this market as there is a cut-throat competition among the firms.</td>
</tr>
<tr>
<td>3. The firm, in the long run, enjoy abnormal profits (AR&gt;AC) since the firm itself is an industry, &amp; the product has no close substitute.</td>
<td>3. The firms, in the long run, earn normal profits as AR=AC, since there is a freedom of entry &amp; exit of the firms in the market.</td>
</tr>
<tr>
<td>4. The entry &amp; exit of the firms in this market is not possible due to various constraints &amp; patent right.</td>
<td>4. There is a freedom of entry &amp; exit of the firms in the market.</td>
</tr>
<tr>
<td>5. The demand for the product is less elastic, i.e ( e_p &lt; 1 ) &amp; therefore the DD has rapid negative slope.</td>
<td>5. The demand for the product has more elasticity, i.e ( e_p &gt; 1 ), &amp; therefore the DD has gradual negative slope.</td>
</tr>
<tr>
<td>6. The monopoly firm has total control over the market output of the product in the market.</td>
<td>6. The firms do not have control over the total output of the product, since large number of firms produce similar kind of product.</td>
</tr>
</tbody>
</table>

3. Write features of Oligopoly.
Ans. It is a form of market where very few firms are selling a commodity to large number of buyers.

Features of Oligopoly
1. Few firms
2. Interdependence
3. Price rigidity
4. Barriers to entry of firms

4. How Equilibrium Price is determined?
Ans. Equilibrium price or market price refers to the price at which the market demand for a good is equal to its market supply. It is also often referred to as determined price of the product in the mar...
5. Explain the effect of change in market demand and market supply on equilibrium price and quantity.
Ans. Effect on Eqm. Price & Qty. due to change in both Demand & Supply at same proportion:

When there is a change in both demand & supply at same proportion, in case of increase in both, the eqm. price remain same (OP) but eqm. qty. rises (from OQ to OQ’). In case of decrease in both at uniform rate, the eqm. Price remain same at OP, but eqm. Qty. will fall to OQ” from

5. How is price of a good determined in a perfectly competitive market? Explain, use diagram.

**Ans. Price & Output determination in Perfect Competition Market**

As we know that a perfect competition market is characterized by the existence of large number of buyers & firms, and the firms produce & sell homogenous products; therefore no single buyer and seller can influence the price, and no firm has the total control over the total output of the good. Thus, the price of the good is determined in the industry (market) by the interaction of market demand & supply. The price is determined where the market demand for the good is equal to its supply. This phenomenon can be explained by the following illustration:

This table reveals that when the price of the good is Re.1, its market demand is greater than its market supply; and thus there is excess demand. This will lead to create competition among the buyers, & thus the price of the good will rise. The rise in price will lead to fall in demand & rise in its supply. Still we see that demand is greater than its supply, & thus the same process will continue until both are equal to each other. The price at which they both are equal will be the determined price (equilibrium price) of the good in the perfect market. On the other hand, if the price is Rs.5, the supply is greater than its demand, which will lead to create competition among the sellers, & thus the price will fall. The fall in price will lead to rise in demand & fall in supply. This process will continue till both demand & supply are equal to each other. Thus, the determined price is Rs.3, because at this price, both are equal to each other.
Define Market?
Ans: In economics, market is used as a broader term, which refers to a region in which buyers & sellers interact with each other – may be directly or indirectly – in order to exchange the commodities at certain price.

29. Under which market form, a firm is a price taker?
Ans. Under Perfect competitive Market

30. Under which market form, the firm is a price maker?
Ans. Under Monopoly Market

31. Distinguish between monopolistic competition & monopoly

<table>
<thead>
<tr>
<th>Monopoly Market</th>
<th>Monopolistic Competition Market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In this case, there is existence of single firm which has no close competitor, &amp; the firm produce &amp; sell unique product which has no close substitute in the market.</td>
<td>1. In this case, a large number of firms exist in the market which produce &amp; sell heterogeneous product, &amp; thus, there is availability of close substitute of the product.</td>
</tr>
<tr>
<td>2. There is no prevalence of selling cost, as it is not required.</td>
<td>2. Prevalence of selling cost is the most prominent feature of this market as there is a cut-throat competition among the firms.</td>
</tr>
<tr>
<td>3. The entry &amp; exit of the firms in this market is not possible due to various constraints &amp; patent right.</td>
<td>3. There is a freedom of entry &amp; exit of the firms in the market.</td>
</tr>
<tr>
<td>4. The demand for the product is less elastic, i.e ( e_p &lt; 1 ) &amp; therefore the DD has rapid negative slope.</td>
<td>4. The demand for the product has more elasticity, i.e ( e_p &gt; 1 ), &amp; therefore the DD has gradual negative slope.</td>
</tr>
<tr>
<td>5. The monopoly firm has total control over the market output of the product in the market.</td>
<td>5. The firms do not have control over the total output of the product, since large number of firms produce similar kind of product.</td>
</tr>
</tbody>
</table>

32. How is price of a good determined in a perfectly competitive market? Explain, use diagram.
Ans. Price & Output determination in Perfect Competition Market

As we know that a perfect competition market is characterized by the existence of large number of buyers & firms, and the firms produce & sell homogenous products; therefore no single buyer and seller can influence the price, and no firm has the total control over the total output of the good. Thus, the price of the good is determined in the industry (market) by the interaction of market demand & supply. The price is determined where the market demand for the good is equal to its supply. This phenomenon can be explained by the following illustration:
This table reveals that when the price of the good is Re.1, its market demand is greater than its market supply; and thus there is excess demand. This will lead to create competition among the buyers, & thus the price of the good will rise. The rise in price will lead to fall in demand & rise in its supply. Still we see that demand is greater than its supply, & thus the same process will continue until both are equal to each other. The price at which they both are equal will be the determined price (equilibrium price) of the good in the perfect market. On the other hand, if the price is Rs.5, the supply is greater than its demand, which will lead to create competition among the sellers, & thus the price will fall. The fall in price will lead to rise in demand & fall in supply. This process will continue till both demand & supply are equal to each other. Thus, the determined price is Rs.3, because at this price, both are equal to each other.

### Price & Output determination in perfect competition market

![Graph of Price & Output determination in perfect competition market]

### Control Price & Support Price

What happens when Govt. intervenes in the free market price mechanism?

**Control price** refers to the price which is fixed by the Govt. below to market price in order to protect the poor consumers. It is one of the important instruments for social welfare & economic justice. But the use of this may lead to evil consequences viz. Black marketing, forcible rationing & long queue of unsatisfied consumers. This can be shown by the following figure:

In this figure, we can see that the market(equilibrium) price is OP, & eqm. qty. is OQ. Y-axis refers to price & X-axis refers to Qty. of demand & supply. The Govt. imposes control price (Pc) to protect the poor consumers. As a result, the supply of the good falls to OQ1, while market demand rises to OQ2 (law of supply & demand respectively). Consequently, there arises the gap between the demand & supply (ab) i.e. excess demand situation.
Due to this, larger demands will remain unsatisfied, & therefore govt. will be compelled to impose forcible rationing which will lead to curtailment of needs of the household. Another evil consequence will be the practice of ‘Black marketing’ by the traders, which implies that when the traders sell the goods at the price higher than control price to the potential consumers. This leads to the prevalence of black money or what is called as unaccountable money. Thus, it is the duty of the govt. to look at the pros & cons before imposing the control price.

Support price refers to the price which is fixed by the govt. above to the market price to protect the weak & sick producers. It is just the contrary to the control price. The support price leads to fall in demand & rise in supply (due to the operation of law of demand & supply respectively. This creates the gap of excess supply, & this excess leads to wastage, & further unemployment & poverty. In this situation, the govt. purchases the excess or it is dumped in the foreign markets.

1. Effect on Equilibrium Price & Qty. due to change in demand while supply remain unchanged:

From this figure, when the demand increases, the eqm. price rises to $E_1Q_1$, & eqm. Qty. also rises to $OQ_1$, while supply remain unchanged. Vice versa happens when the demand decreases to $D_2$.

2. Effect on Equilibrium Price & Qty. due to change in supply while demand remain unchanged:

From this figure we see that when supply increases to $S_1$, the eqm. Price falls to $E_1Q_1$ while qty. rises to $OQ_1$, while demand remain same, since the new SS intersects DD at point $E_1$. The decrease in supply leads to rise in eqm. Price to $E_2Q_2$, but the qty. falls to $OQ_2$. 
The following question carries 1 marks each.
1. Define macro economics.
Ans: Macroeconomics is the study of aggregates covering the entire economy.
2. Give two examples of macro economics.
Ans: 1) Aggregate consumption.
2) Aggregate savings.
3. Write the names of two sectors included in two sector model of circular flow of income.
Ans: 1) Firms 2) Household sector.
4. Name four major sectors of an economy.
5. What is given to the household sector by the firm for obtaining its services?
Ans: 1) Rent 2) Interest 3) Wages 4) Profit.
6. Name the two components of external sector.
Ans: 1) Export 2) Import.
7. What are the four factors of production?
8. What do you understand by circular flow of income?
Ans: Circular flow of income forms the basis of measurement of macroeconomic activities. It helps to know the functioning of an economy.
9. Write the types of circular flow of income.
Ans: 1) Real flow 2) Money flow.
10. Explain the term – Real flow.
Ans: Under real flow of income household render factor services to the firms and the firms produce goods and services to pay further services.
11. Explain the term – Money flow.
Ans: Under money flow of income all payments by the firms to the households for their factor services and by the households to the firms for the purchase of goods and services are made in terms of money.
12. Give two scopes of macro economics.
Ans: 1) Concept and measurement of national income.
2) Money and banking.
13. Is the study of general price level a micro or macro economic study?
Ans: Macro economic study.
14. Who is the father of modern Macroeconomics analysis?
Ans: Lord J.M. Keynes.
15. Name the book written by Lord J.M. Keynes on Macro Economics.
Ans: “General Theory of Employment, Interest and Money”.

**IMPORTANT QUESTIONS FOR BRIGHT STUDENTS**

(MACRO ECONOMICS)

The following question carries 1 marks each.
1. What do you understand by circular flow of income?
Ans: Circular flow of income forms the basis of measurement of macroeconomic activities. It helps to know the functioning of an economy.
2. Explain the term – Real flow.
Ans: Under real flow of income household render factor services to the firms and the firms produce goods and services to pay further services.
3. Explain the term – Money flow.
Ans: Under money flow of income all payments by the firms to the households for their factor services and by the households to the firms for the purchase of goods and services are made in terms of money.
4. Give two scopes of macro economics.
Ans: 1) Concept and measurement of national income.
2) Money and banking.
The following question carries 3 marks each.

1. What is the difference between microeconomics and macroeconomics?
   Ans: **Microeconomics**: It studies the behaviour of industries of the economy like consumers, producers etc and explain through their interactions that how the resources are allocated among competing uses.
   **Macroeconomics**: It studies the economy as a whole and explains how the aggregates of the entire economy are determined like national income, aggregate demand etc.
2. Explain three features of capitalist economy.
   Ans: 1) Means of production are owned and controlled by private individuals and firms.
         2) Profit motive is the main aim.
         3) Freedom of choice by the consumers.

The following question carries 4 marks.

1. Explain the four sectors of an economy.
   Ans: 1) **Households**: Families or individuals who supplies factors of production to the firms and buys goods and services from the firms.
        2) **Firms**: Economics units which carry out production of goods and services with the help of factors of production.
        3) **Government**: The state which maintains law and order in the country imposes taxes and fines and works for the well being of the citizens.
        4) **External Sector**: It refers to the economic transactions in the domestic country with the rest of the world.

MACRO ECONOMICS
NATIONAL INCOME ACCOUNTING
(Questions for slow bloomers)

The following question carries one mark each.

1. What is real flow?
   Ans: It refers to the flow of factor services from households to the firms and the corresponding flow of goods from firms to house holds.
2. What is money flow?
   Ans: It refers to the flow of factor payments from firms to households for their factor services and the corresponding flow of money from household to firms in the form of consumption expenditures on the purchase of goods and services by households.
3. What are transfer payment?
   Ans: Transfer payment are those payments which are given without any contribution in the production of goods and services. e.g. old age pensions, scholarship.
4. What is the difference between factor cost and market price?
   Ans: Factor cost = Market price - NIT
5. Define the concept of a normal resident.
   Ans: A resident or a normal resident of a country is a person who ordinarily resides in a Country and whose centre of interest also lies in that country.
6. Define economic territory.
   Ans: Economic or domestic territory is the geographical territory administered by a government within which persons, goods and capital circulated freely.
7. Define GDP.
   Ans: Gross Domestic Product is the market value of all the final goods and services produced within the domestic territory of a country during a year.
8. Define Market price.
   Ans: It is the price paid by the buyer of a commodity in the market.
   Ans: It is the cost paid by the producer to the factors of production for their contribution in the production of the commodity.
10. What are net indirect taxes?
    Net indirect taxes are equal to the indirect taxes minus subsidies.
11. Give one example of indirect tax.
    Ans: Sales tax.
12. Give one example of direct tax.
Ans: It refers to the income earned by private enterprises and households both within the domestic territory and abroad.

Ans: It is the sum of all kinds of income received by the individuals or households from all sources.

15. Define personal disposable income.
Ans: It is the income available to persons from all the sources to dispose of as they like after deducting personal taxes like income tax, property tax etc.

Ans: It is the income from all sources available to the residents of a country for spending on consumption and for savings.

17. Define GDP Deflator.
Ans: It is defined as the ratio of nominal GDP to real GDP.

18. In which situation GDP and NNP would become equal?
Ans: When fixed capital consumption and NFIA are zero.

19. Name three methods of measuring national income.
Ans: 1. Product or Value added method.
2. Income method.
3. Value Added method.

20. How do we calculate Value of Output?
Ans: Value of Output = Sales + Change in Stock.

(Questions for bright students)

The following question carries one mark each.

1. What are intermediate goods?
2. How do we calculate value added by the firm?
3. Define operating surplus.
4. Name the different components of profit.
5. Define factor income.
6. Define transfer payment.
7. How double counting can be avoided?
8. What do you understand by windfall gains.
9. Name the components of final expenditure.
11. What is meant by net exports?
12. Define inventory.
13. How is change in inventories measured?
15. What is meant by the services produced for self-consumption?
16. Why old age pension is not included while estimating national income by income method?
17. Write the formula for NDP at factor cost.
18. What is meant by externalities?
19. Define mixed income.
20. Write the formula for GDP at market price.

Note: (The one mark question from this unit will not come but it is very important to clear the various concept related to unit VI, hence students are advised to go through it.)

(Questions for slow bloomers)

The following question carries 3/4 marks each.

1. Distinguish between final good and intermediate good.
Ans: a) Final goods: It refer to those goods which are used either for consumption or for investment.
   b) Example of final goods are Clothes, TV sets.
a) **Intermediate goods:** It refer to those goods which are used either for resale or for further production.

b) Example of intermediate goods are milk purchased by a dairy shop.

2. **Distinguish between consumption goods and capital goods.**
   
   **Ans:**
   
   a) **Consumption goods:** It refers to those goods which satisfy the wants of the consumers directly.
   
   b) Examples of consumption goods are butter, pants and shirts.

   a) **Capital goods:** It refers to those goods which are used for further production of goods and services.

   b) Example of capital goods and services are machineries, equipments, etc.

3. **Distinguish between stock and flow.**
   
   **Ans:**
   
   a) Stock refers to that variable which is measured at a particular point of time.

   b) Example of stock is population of India as on 21st March 2009.

   a) Flow refers to that variable which is measured over a period of time.

   b) Example of flow is births during 2008-09.

4. **Distinguish between nominal and real GDP.**
   
   **Ans:**
   
   a) Nominal GDP is calculated on the basis of current year price.

   b) It is not a good measure of welfare.

   a) Real GDP is calculated on the basis of base year price.

   b) It is a better measure of welfare.

5. **Explain gross investment and net investment.**
   
   **Ans:**
   
   a) Gross investment refers to the total investment made in a given period of time of an economy.

   b) Gross investment = Net investment + depreciation

   c) Net investment is the difference between gross investment and depreciation.

6. **Explain indirect tax and net indirect tax.**
   
   **Ans:**
   
   a) Indirect tax refers to those taxes which are imposed by the govt. to an entrepreneur on the production and sale of goods and services.

   b) e.g. sales tax, customs duty.

   c) Net indirect tax is the difference between indirect tax and subsidies.

7. **What are the precautions to be taken in calculating national income by income method?**
   
   **Ans:**
   
   i) Transfer earnings should not be included in the national income.

   ii) Income from illegal activities should not be included in the national income

   iii) Brokerage income on sale and purchase of bonds is to be included.

   iv) Windfall gains should not be included.

8. **What are the precautions to be taken in calculating national income by expenditure method?**
   
   **Ans:**
   
   i) Expenditure on second hand good should not be included

   ii) Expenditure on shares and bonds should not be included

   iii) Transfer income should not be included.

   iv) Expenditure on final good should be included.

9. **What are the precautions to be taken in calculating national income by product method?**
   
   **Ans:**
   
   i) Value of second hand good should not be included.

   ii) Value of intermediate good should not be included.

   iii) Value of imputed rent should be included.

   iv) Commission earned on the sale of second hand good should be included.

10. **Write four important features of national income.**

    **Ans:**

    i) National income is counted for a period of one accounting year i.e from April 1 to 31st March.

    ii) National income is a flow concept.

    iii) We include only final goods & services in the calculation of national income.

    iv) National income is always calculated in terms of monetary value of goods & services.
(Questions for bright students)

1. Classify the various categories of Final Expenditure.
2. Explain the steps involved while estimating national income by income method.
3. Explain the steps involved while estimating national income by expenditure method.
4. Explain the steps involved while estimating national income by value added method.
5. Explain the term a) Compensation of employees b) Operating surplus.
6. Explain the importance of double counting. How it can be avoided by giving one example?
7. How far GDP can be taken as an index of welfare?
8. Explain how the following are treated in estimating national income? (Give reasons).
   i) Wheat grown by a farmer but used for family’s consumption.
   ii) Earnings of the shareholders from the sale of shares.
   iii) Expenditure by government on providing free education.
9. Explain how the following are treated in estimating national income? (Give reasons).
   i) Purchase of a truck to carry goods by a production unit.
   ii) Payment of income tax by a producing unit.
   iii) Services rendered by family members to each other.
10. Distinguish between GDP at market price and GDP at factor cost.
11. Explain domestic income and national income.
12. What is private income? How does it differ from personal income?
13. Give the distinction between domestic product and national product on the basis of concept of resident and domestic territory.
14. Explain the concept of leakages & injections in the circular flow of income.
15. How will you derive personal disposable income from national income?

MACRO ECONOMICS
NATIONAL INCOME ACCOUNTING

Important formulas for national income

1. GDP at Mp = Market value of final goods and services produced within the domestic territory of a country in an accounting year.
2. GNP at Mp = GDP at Mp + Net factor income from abroad
3. NNP at Mp = GNP at Mp – Depreciation
4. NDP at Mp = NNP at Mp – Net factor income from abroad
5. NDP at Fc = NDP at Mp – Indirect tax + Subsidies
6. GDP at Fc = NDP at Fc + Depreciation
7. GNP at Fc = GDP at Fc + Net factor income from abroad
8. NNP at Fc = GNP at Fc - Depreciation
9. National disposable income = NDP at Fc + Net indirect tax + Net factor income from abroad + net current transfer from rest of the World
10. Gross national disposable income = Net national disposable income + Depreciation
11. Factor income from NDP accruing to private sector = NDP at Fc – property and entrepreneurial income of the department enterprises of the govt. – saving of non – departmental enterprise
12. Private income = Income from domestic product accruing to private sector + Net factor income from abroad + current transfer from govt. + current transfer from rest of the world + Interest on national debt
13. Personal Income = Private income – Corporate tax – Undistributed profit
14. Personal Disposable income = Personal income – Direct personal tax Miscellaneous fees and fines paid by the households
Value added method

1. Value added = Value of output – Intermediate consumption
2. Value of output = Sales + Δ in stock
3. Δ in stock = Closing stock – opening stock
4. National income = Gross value added by primary sector + gross value added by secondary sector + gross value added by tertiary sector – Depreciation – Net indirect tax + Net factor income from abroad

Income method

1. NDP at Fc = Compensation of employees + Operating surplus + mixed income
2. NNP at Fc = Compensation of employees + Operating surplus + mixed income + Net factor income from abroad
3. Operating Surplus = Rent + Interest + Profit
4. Profit = Dividend + Profit or corporate tax + Undistributed profit

Expenditure method

1. GDP at Mp = Private final consumption expenditure
   + Govt. final consumption expenditure
   + Gross domestic fixed investment
   + Inventory investment
   + Net export
2. Gross domestic fixed investment = Business fixed investment + Govt. fixed investment + Investment on residential construction
3. Inventory investment = Δ in stock = Closing stock – opening stock
4. Net export = Export – Import

NUMERICALS

(DISPOSABLE INCOME)

(for slow bloomers)

(1) Calculate Net national disposable income from the following data:

(Rs in crores)

(i) Net domestic product at factor cost 500
(ii) Net indirect tax 50
(iii) Net factor income from abroad (-)20
(iv) Net export (-)30
(v) Net current transfer from rest of the world 40

Ans: Net national disposable income = (i) + (iii) + (ii) + (v)

500 + (-) 20 + 50 + 40

= Rs 570 crores
(2) Calculate Personal disposable income from the following:

(Rs crores)

(i) Net current transfer from rest of the world  3
(ii) Private income  200
(iii) Personal tax  30
(iv) National debt interest  5
(v) Profit tax  20
(vi) Undistributed profit  10

Ans : PDI = (ii) – (v) – (vi) – (iii)
= 200 – 20 10 -30 
= Rs 140 crores

(3) Calculate Private income from the following data:

(Rs crores)

(i) National debt interest  30
(ii) GNP at market price  400
(iii) Current transfer from the government  20
(iv) Net indirect tax  40
(v) Net current transfer from rest of the world  (-)40
(vi) NDP at factor cost accruing to government  50
(vii) Consumption of fixed capital  70

Ans : Private income = (ii) – (vii) – (iv) – (vi) + (i) + (iii) + (v)
= 400 – 70 – 40 -50 + 20 + (-)40
= Rs 280 crores.

4. Calculate Personal Disposable Income from the following data:

(Rs in crores)

(1) Net current transfers from rest of the world  3
(2) Private Income  200
(3) Personal taxes  30
(4) National debt interest  5
(5) Corporate profit tax  20
(6) Undistributed profits  10
Ans: PDI = (2)-(5)-(6)-(3)
     = 200-20-10-30
     = 140 crores

5. Calculate PDI from the following data:

(Rs in crores)

(1) Direct tax paid by the households  6500
(2) Corporation tax                       1500
(3) Household final consumption expenditure  24500
(4) Interest on national debt             2000
(5) Saving of private corporate sector    3500
(6) Household savings                    7500

Ans:  PDI = (3)+(6)
      = 24500+7500
      = 32000 crores

VALUE ADDED
(for slow bloomers)

1. Calculate the value added by firm A and firm B from the following data:

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purchase by firm A from the Rest of the world</td>
<td>30</td>
</tr>
<tr>
<td>2. Sales by firm B</td>
<td>90</td>
</tr>
<tr>
<td>3. Purchase by firm A from B</td>
<td>50</td>
</tr>
<tr>
<td>4. Sales by firm A</td>
<td>110</td>
</tr>
<tr>
<td>5. Exports by firms A</td>
<td>30</td>
</tr>
<tr>
<td>6. Opening stock of firm A</td>
<td>35</td>
</tr>
<tr>
<td>7. Closing stock of firm A</td>
<td>20</td>
</tr>
<tr>
<td>8. Opening stock of firm B</td>
<td>30</td>
</tr>
<tr>
<td>9. Closing stock of firm B</td>
<td>20</td>
</tr>
<tr>
<td>10. Purchases by firm B from firm A</td>
<td>50</td>
</tr>
</tbody>
</table>

Ans. (1) Value added by firm A = 4+5+Change in Stock of firm A -3-Purchases by firm A from the rest of the world.
      = 110+30+(20-35)-50-30
      = Rs. 45 lakhs
2. From the following data find out value added by firm X:

(1) Sales by firms Y to firm X 400
(2) Sales by firms X to households 500
(3) Purchases by firm Z from firm X 300
(4) Opening stock of firm X 25
(5) Closing stock of firm X 75

Ans: Value added by firm X = (2) + (5) - (4) - (1) + (3)
= 500 + (75 - 25) + 300 - 400
= 450 lakhs

(4) Calculate Sales from the following data:

<table>
<thead>
<tr>
<th>Items</th>
<th>(Rs in lakh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Net value added at factor cost</td>
<td>300</td>
</tr>
<tr>
<td>(ii) Net addition to stocks</td>
<td>(-)20</td>
</tr>
<tr>
<td>(iii) Sales tax</td>
<td>30</td>
</tr>
<tr>
<td>(iv) Depreciation</td>
<td>10</td>
</tr>
<tr>
<td>(v) Intermediate consumption</td>
<td>100</td>
</tr>
<tr>
<td>(vi) Subsidy</td>
<td>5</td>
</tr>
</tbody>
</table>

Ans: Sales = Net value added at Fc – (ii) + (v) + (iv) + (iii) – (vi)
= 300 – (-20) + 100 + 10 + 30 – 5
= Rs 455 lakhs

VALUE ADDED

(For bright students)

1. Calculate Gross value Added at Market Price from the following:

(1) Intermediate cost 8
(2) Closing stock 5
(3) Sales 30
(4) Net indirect Tax 6
(5) Subsidy 1
(6) Depreciation 3
(7) Opening stock 4
2. From the following data, calculate Gross value added at factor cost:

(1) Net indirect tax 20
(2) Purchases 120
(3) Purchases of machines 300
(4) Sales 250
(5) Consumption of fixed capital 20
(6) Change in stock 30

**Expenditure method**

*(For bright students)*

1. From the following data calculate National Income by Expenditure method:

(Rs. In crores)

(1) Compensation of employees 1200
(2) Net factor income from abroad (-)20
(3) Net indirect taxes 120
(4) Profit 800
(5) Private final consumption expenditure 2000
(6) Net domestic capital formation 770
(7) Consumption of fixed capital 130
(8) Rent 400
(9) Interest 620
(10) Mixed income of self employed 700
(11) Net import 30
(12) Government final consumption expenditure 1100

2. From the following data calculate National income by Expenditure method:

(Rs. In crores)

(1) Compensation of employees 1200
(2) Net factor income from abroad (-) 20
(3) Net indirect taxes 120
(4) Profit 800
(5) Private final consumption expenditure 2000
(6) Net domestic capital formation 770
(7) Consumption of fixed capital 130
(8) Rent 400
(9) Interest 620
(10) Mixed income of self employed 700
(11) Net exports (-)30
(12) Government final consumption expenditure 1100

Ans: Rs. 3700 crores.

**Expenditure method**
*(For slow bloomers)*

1. Calculate gross domestic product at factor cost. (Rs crore)

   (i) Private final consumption expenditure 800
   (ii) Net domestic capital formation 150
   (iii) Change in stock (-)20
   (iv) Net factor income from abroad 30
   (v) Net indirect tax 120
   (vi) Government final consumption expenditure 450
   (vii) Net export (-)30
   (viii) Consumption of fixed capital 50

   Ans : GDP at Fc = (i) + (vi) + [ (ii) + (viii) ] + (vii) – (v)
   
   = 800 + 450 + 150 + 50 -30 -120
   
   = Rs 1300 crores

2. Calculate national income and net national disposable income from the following:

   (Rs. Crores)

   (i) Current transfer from govt. 35
   (ii) Private final consumption expenditure 500
   (iii) Net current transfer from rest of the world (-)10
   (iv) Govt. final consumption expenditure 150
   (v) Net factor income from abroad (-)20
   (vi) Net domestic capital formation 100
   (vii) Net indirect tax 120
   (viii) Net export 50
Ans: National income = (ii) + (iv) + (vii) + (viii) + (v) – (vii)

\[= 500 + 150 + 100 + 50 + (-20) -120\]

\[= 660 \text{ cr.}\]

\[\text{NNDI} = \text{NNP at FC} + \text{NIT} + \text{Net current transfer from rest of the world}\]

\[= 660 + 120 + (-10)\]

\[= 770 \text{ cr.}\]

3. Calculate GDP at Mp and GDP at Fc

<table>
<thead>
<tr>
<th>Items</th>
<th>(Rs in crores)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Gross investment</td>
<td>90</td>
</tr>
<tr>
<td>(ii) Net export</td>
<td>10</td>
</tr>
<tr>
<td>(iii) Net indirect taxes</td>
<td>5</td>
</tr>
<tr>
<td>(iv) Depreciation</td>
<td>15</td>
</tr>
<tr>
<td>(v) Net factor income from abroad</td>
<td>(-5)</td>
</tr>
<tr>
<td>(vi) Private consumption expenditure</td>
<td>350</td>
</tr>
<tr>
<td>(vii) Govt. purchases of goods and services</td>
<td>100</td>
</tr>
</tbody>
</table>

Ans: GDP at Mp = (i) + (ii) + (vi) (vii)

\[= 90 + 10 + 350 + 100\]

\[= \text{Rs 550 crores}\]

GDP at Fc = GDP at Mp – Net indirect tax

\[= 550 - 5\]

\[= 545 \text{ crore}\]

4. Find NDP at Fc from the following:

<table>
<thead>
<tr>
<th>Items</th>
<th>(Rs )</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Gross domestic fixed investment</td>
<td>10,000</td>
</tr>
<tr>
<td>(ii) Inventory Investment</td>
<td>5,000</td>
</tr>
<tr>
<td>(iii) Depreciation</td>
<td>2,000</td>
</tr>
<tr>
<td>(iv)Indirect taxes</td>
<td>1,000</td>
</tr>
<tr>
<td>(v) Subsidies</td>
<td>2,000</td>
</tr>
<tr>
<td>(vi) Consumption expenditure</td>
<td>20,000</td>
</tr>
<tr>
<td>(vii) Residential construction investment</td>
<td>6,000</td>
</tr>
</tbody>
</table>
Ans: NDP at Fc = (i) + (ii) − (iii) − (iv) + (v) + (vi) + (vii).

= 10,000 + 5000 − 2,000 − 1,000 + 2,000 + 20,000

= Rs 34,000

Numericals
Income method
(For slow bloomers)

1. Following informations are given:
   i) Wages for employees 7000
   ii) Rent 1500
   iii) Profits 4200
   iv) Interest 700
   v) Net indirect taxes 150
   vi) Consumption of fixed capital 200
   vii) Net factor income from abroad 400

Calculate: a) NDP at FC b) NDP at MP c) GDP at MP d) NNP at FC

Solution:

a) NDP at FC = wages for employees + rent + profits + interest
= 7000 + 1500 + 4200 + 700
= 13400

b) NDP at MP = NDP at FC + Net indirect tax
= 13400 + 150
= 13550

c) GDP at MP = NDP at MP + consumption of fixed capital
= 13550 + 200
= 13750

d) NNP at FC = NDP at FC + Net factor income from abroad
= 13400 + 400
= 13800 crores

2. From the following data calculate the GNP at MP with income method.
   i) Wages and salaries 800
   ii) Rent 200
   iii) Depreciation 60
   iv) Net factor income from abroad -15
   v) Subsidies 100
   vi) Profits 500
   vii) Indirect taxes 200
   viii) Interest 50

Solution:

GNP at MP = Wages and salaries + rent + interest + profit + depreciation + indirect taxes – subsidies + Net factor income from abroad

= 800 + 200 + 50 + 500 + 60 + 200 - 100 + (-15)

= 1695 crores
3. Calculate GNP at FC by income method:
   i) Rent 40
   ii) Net exports 20
   iii) Interest 60
   iv) Profit 120
   v) Compensation for employees 800
   vi) Consumption of fixed capital 20
   vii) Net indirect taxes 100
   viii) Net factor income from abroad (-)20

   Solution:
   \[ \text{GNP at FC} = \text{Rent} + \text{Interest} + \text{Profit} + \text{Compensation for employees} + \text{Consumption of fixed capital} + \text{Net indirect taxes} + \text{Net factor income from abroad} \]
   \[ = 40 + 60 + 120 + 800 + 20 + 100 + (-)20 \]
   \[ = 1120 \]

4. Calculate gross national income by income method:
   i) Factor income from abroad 10
   ii) Compensation of employees 150
   iii) Factor income to abroad 15
   iv) Consumption of fixed capital 15
   v) Interest 40
   vi) Indirect taxes 30
   vii) Subsidies 10
   viii) Rent 40
   ix) Profit 100

   Solution:
   \[ \text{GNI (GNP at FC)} = \text{Compensation of employees} + \text{Rent} + \text{Interest} + \text{Profit} + \text{Consumption of fixed capital} + \text{Indirect taxes} - \text{Subsidies} + \text{Factor income from abroad} - \text{Factor income to abroad} \]
   \[ = 150 + 40 + 40 + 100 + 15 + 30 - 10 + 10 - 15 \]
   \[ = 360 \]

5. Calculate GNP at MP (Rs. Crores)
   (i) Net current transfer to abroad (-) 5
   (ii) Profit 70
   (iii) Consumption of fixed capital 30
   (iv) Rent 40
   (v) Indirect tax 20
   (vi) Interest 100
   (vii) Royalty 10
   (viii) Compensation of employees 600
   (ix) Subsidies 5
   (x) Net factor income from abroad (-)25

   Ans: GNP at MP = (viii) + (iv) + (vi) + (vii) + (ii) + (x) + (iii) + (v) - (ix)
   \[ = 600 + 40 + 100 + 10 + 70 + (-)25 + 30 + 20 - 5 \]
   \[ = 840 \]
Q.1 What is Money?
Ans. Money is anything that has the general acceptability as a common medium of exchange & as a common measure of the value of the commodities.

Q.2 What are the functions of money?

Ans. The functions of money can be classified into Primary & Secondary functions.

1. PRIMARY FUNCTIONS

A) Money act as a common medium of exchange which is the most essential function as it enables us to identify money as a commodity which is generally acceptable to all. It facilitates the exchange of goods & services, & thus facilitates multilateral trade.

B) Money act as a common measure of value b’coz it has the general acceptability & it has a stable value in itself. This helps in promoting the trade and industry in an economy, & helps in facilitating the exchange process among the different sectors.

2. SECONDARY FUNCTIONS

C) Money act as a Standard of Deferred payments i.e. the payments to be made in future. Money serves as the measure by which the value of future payments is regulated, since its value is more or less stable & it has the wide acceptability.

D) Money acts as a Store of Value being it is a common measure of value and generally accepted means of payments. This implies that the purchasing power can be shifted from its present to its future. Moreover, money is the most economic & convenient way of hoarding. This enables the people to save a part of their current income & store it for future use.

E) Money act as a transfer of value as it helps in transferring the value of assets from one person to another person & one place to another place. This is possible b’coz money is the most liquid asset. This facilitates the mobility of labour and other inputs which in turn accelerates the economic growth & development.

Q.3 What do you mean by money supply?

Ans. It refers to the total stock of money in an economy at any point of time, held by the general public The Reserve Bank of India labeled the money supply as M1, M2, M3, M4. These are the four measures of money supply in India which are explained below:

- M1 consist of currency notes & coins held by the public(C), Net demand deposits (excluding inter bank deposits) i.e. Demand Deposits held by the public in the banks (DD), other deposits held by the RBI i.e. the deposits of all economic units except the Govt. & Banks (OD). Thus, 
  \[ M_1 = C + DD + OD \]

- M2 consist of M1 & Savings deposits with Post Office Savings Banks (POSB). Thus, 
  \[ M_2 = M_1 + \text{Savings deposits of POSB} \]

- M3 consist of M1 & Net Time deposits of Banks i.e. excluding the inter-bank time deposits. Thus, 
  \[ M_3 = M_1 + \text{Net time deposits of Banks} \]

- M4 consist of M3 & the total deposits with Post Office Saving Organization excluding National Saving Certificate (NSC). Thus, 
  \[ M_4 = M_3 + \text{Deposits of Post Office Saving Organization} \]
Q.4 What are the Static and Dynamic Functions of money?

Ans. Static functions of money are those functions which assure smooth working of the economic system while Dynamic functions are those functions which influence the economic system through its impact on Price level, Rate of Interest, Volume of Production, Expansion of International Trade etc.

Q.5 Write the Narrow & Broad Definitions of Money.

Ans. Narrow definition of money refers to its function as medium of exchange, while the broad definition of money has extended the function of money to a high degree of money ness (liquidity) & is widely used as a store of value. This implies that the broad money includes bank deposits with the banks & post offices.

Q.6 What is Barter system?

Ans. It refers to the exchange of goods for goods. In other words, it refers to the direct exchange of goods & services with another.

BANKING

Q.1 Define Commercial bank.

Ans. A Commercial bank is a financial institution which performs the function of accepting deposits from the public & advancing loans. This banks act as the financial intermediary between the idle resources & the productive sources of resources.

Q.2 Explain how does a commercial bank create money supply?

Ans: PROCESSN OF CREDIT CREATION BY COMMERCIAL BANKS:

Credit creation by the banks is determined by (i) the amount of initial deposits and ii) the legal reserve ratio (LRR). It is assumed that all the money that goes out of banks is redeposited into the banks, and LRR consists of CRR & SLR.

An Illustration to explain the process of credit creation:

Let the LRR be 20% and there is a Fresh/Primary/Initial/Deposit Account of Rs 10000. The banks keep 20% ie Rs 2000 as cash and lend the remaining Rs 8000 to a borrower by opening a new account, called as Loan/Secondary/Derived Account.

<table>
<thead>
<tr>
<th>ROUNDS</th>
<th>INITIAL DEPOSIT</th>
<th>LRR</th>
<th>SECONDARY DEPOSIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10000</td>
<td>2000</td>
<td>8000</td>
</tr>
<tr>
<td>2</td>
<td>8000</td>
<td>1600</td>
<td>6400</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>50000</td>
<td>10000</td>
<td>40000</td>
</tr>
</tbody>
</table>

Here we assume that all the banking transactions will be through monetary instruments viz cheques etc.

As assumed, the amount of Rs 8000 will come back to the banks as fresh deposit from which once again the bank will keep 20% ie Rs 1600 as LRR and rest Rs 6400 will be lend to some other borrower. The bank now creates another secondary account which will once again become a primary account. This process continues and the money goes on
multiplying till the sum of LRR and the fresh deposit amount is same or the new deposit becomes nil. Finally, when we add the total money creation, we get Rs 50000 as the total deposit creation.

Total credit creation = Initial deposit \times \frac{1}{LRR} = 10000 \times \frac{1}{20\%} = 10000 \times \frac{100}{20} = Rs 50000

Q.3 Define central bank.

Ans.: A Central Bank is an apex institution which directs, control, regulates & supervises the monetary system of a country. Central bank is the monetary authority which leads all banking & non–banking institutions. The name of the Central bank in India is Reserve Bank of India (RBI) which is established in 1935.

The RBI occupies the highest position in the money & capital market. The Central bank in England is Bank of England and in America, Federal Reserve System.

Q.4 What are the Functions of central bank?

1. It has the monopoly of issuing currency notes. It has the exclusive right to issue the currency notes in the country which leads to the uniformity of the currency throughout the nation. Moreover, this enables it to have a total control over the total money supply of the country which leads to the strengthening of the monetary policy during the crisis time.

2. It acts as a banker of the govt. as it accepts the deposits of the govt. & makes payment on behalf of the it, gives financial advices, & advances the loans in the crisis times.

3. It acts as a banker’s bank in the form of lender of last resort, facilitate clearing house facilities & remit the surplus funds.

4. It acts as a custodian of gold reserves & the nation’s stock of foreign exchange reserve.

5. It acts as a controller of credit which is one of the most important functions. Since it is an apex institution, therefore can play an effective role to combat or correct the inflationary or deflationary pressures of an economy.

6. It promote the economic growth & development of the country by erecting the financial institutions in the rural areas, providing direct loans to the farmers, framing the policies in favour of trade & industry, collect the economic informations & publish through its various journals which further helps the govt. & other institutions to adopt the correct policies etc.

Q.5 Write few differences between the Central & Commercial Bank.

<table>
<thead>
<tr>
<th>Central Bank</th>
<th>Commercial Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It has the monopoly of note issue.</td>
<td>1. It does not have right to issue note.</td>
</tr>
<tr>
<td>2. Its motive is maximizing the social welfare.</td>
<td>2. Its aim is to earn personal profit.</td>
</tr>
<tr>
<td>3. It acts as a controller of credit.</td>
<td>3. It creates the credit in the society.</td>
</tr>
<tr>
<td>4. It is fully a govt. institution</td>
<td>4. It may be a govt. or private body.</td>
</tr>
<tr>
<td>5. It does not directly deal with the public.</td>
<td>5. It directly deals with public</td>
</tr>
</tbody>
</table>

Unit VII
THEORY OF INCOME DETERMINATION
MARKS: 12

The following questions carries 1 marks each.
1. What is meant by aggregate demand?
Ans: Aggregate demand is the total demand for goods and services in the economy.
2. Name the components of Aggregate demand.
3. What is meant by aggregate supply?
Ans: Aggregate supply refers to the value of total output available in the economy during a period.
4. What is consumption function?
Ans: The relationship between consumption and income is called propensity to consume or consumption function.
5. What is Average propensity to consume (APC)?  
Ans: APC is the ratio of consumption expenditure to total income.

6. What is Marginal propensity to consume (MPC)?  
Ans: MPC is the ratio of change in consumption to change in income.

7. What is Average propensity to Save (APS)?  
Ans: APS is the ratio of total saving to total income.

8. What is Marginal propensity to Save (MPS)?  
Ans: MPS is the ratio of change in saving to change in income.

9. Write the formula for MPC.  
Ans: MPC = ∆C/∆Y.

10. Write the formula for MPS.  
Ans: MPS = ∆S/∆Y.

11. Write the formula for APC.  
Ans: APC = C/Y.

12. Write the formula for APS.  
Ans: APS = S/Y.

Ans: It is defined as the ratio of change in income to change in investment.

14. Write the formula for investment multiplier in terms of MPC.  
Ans: K = 1/(1-MPC).

15. Write the formula for investment multiplier in terms of MPS.  
Ans: K = 1/MPS.

16. What is the relationship between MPC and MPS?  
Ans: MPC + MPS = 1.

17. What is the relationship between APC and APS?  
Ans: APC + APS = 1.

18. If APC is 0.7, how much will be APS?  
Ans: 0.3

19. If MPC is 0.5, how much will be MPS?  
Ans: 0.5.

20. What is meant by investment?  
Ans: It means addition to the stock of capital goods in the nature of structures and inventory.

21. What are the three elements of understanding investment?  
Ans: 1) Revenue  2) Cost  3) Expectation.

22. What is meant by involuntary unemployment?  
Ans: It refers to a situation in which people are ready to work at the current wage rate but do not find work.

23. What is meant by full employment?  
Ans: It refers to a situation where there is no involuntary unemployment i.e those who are willing to work at the current wage rate get work.

24. What is meant by under employment equilibrium?  
Ans: It refers to a situation of equilibrium between aggregate demand and aggregate supply at which all resources are not fully used and some resources are unutilized.

25. What can be the minimum value of investment multiplier?  
Ans: 1.

26. What is the equilibrium income?  
Ans: It is that level of income where AD = AS.

27. Define equilibrium output.  
Ans: It is that level of output where output produced is equal to quantity demanded.

The following question carries 3 marks each.
1. Calculate savings and AD from the following table.

<table>
<thead>
<tr>
<th>Income</th>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>300</td>
<td>280</td>
</tr>
<tr>
<td>400</td>
<td>360</td>
</tr>
<tr>
<td>500</td>
<td>440</td>
</tr>
</tbody>
</table>

(Given that the investment at all level of income is Rs 40).

Ans:

<table>
<thead>
<tr>
<th>Income</th>
<th>Consumption</th>
<th>Saving</th>
<th>Investment</th>
<th>AD=C+I</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>120</td>
<td>-20</td>
<td>40</td>
<td>160</td>
</tr>
<tr>
<td>200</td>
<td>200</td>
<td>0</td>
<td>40</td>
<td>240</td>
</tr>
<tr>
<td>300</td>
<td>280</td>
<td>20</td>
<td>40</td>
<td>320</td>
</tr>
<tr>
<td>400</td>
<td>360</td>
<td>40</td>
<td>40</td>
<td>400</td>
</tr>
<tr>
<td>500</td>
<td>440</td>
<td>60</td>
<td>40</td>
<td>480</td>
</tr>
</tbody>
</table>

2. Complete the following table:

<table>
<thead>
<tr>
<th>Income</th>
<th>Consumption</th>
<th>Expenditure(in Rs)</th>
<th>APC</th>
<th>MPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>1.20</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>1.00</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>28</td>
<td>0.93</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>36</td>
<td>0.90</td>
<td>0.80</td>
<td></td>
</tr>
</tbody>
</table>

Ans:

<table>
<thead>
<tr>
<th>Income</th>
<th>Consumption</th>
<th>Expenditure(in Rs)</th>
<th>APC=C/Y</th>
<th>MPC=ΔC/ΔY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>4</td>
<td></td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>10</td>
<td>12</td>
<td>1.20</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>20</td>
<td>1.00</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>28</td>
<td>0.93</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>36</td>
<td>0.90</td>
<td>0.80</td>
<td></td>
</tr>
</tbody>
</table>

3. Given increase in investment of Rs.100 crores, and MPC=0.8, find out increase in national income.

Ans: Given that:

ΔI=100 crores.

MPC=0.8

ΔY=?

Multiplier(K)=1/1-MPC

K= 1/1-0.8=5

Now, K = ΔY/ΔI

5=ΔY/100

ΔY=500 crores.
The following question carries 4 marks each

1. What are the components of aggregate demand?

Ans: The components of AD are as follows:

1. **Private consumption expenditure (C)**: It refers to the total amount of expenditure incurred by the households on the purchase of goods and services to satisfy their wants.
2. **Investment expenditure (I)**: It refers to the expenditure incurred by the private firms on the purchase of capital goods like plant and equipment. There is a negative relationship between the rate of interest and investment demand.
3. **Government expenditure (G)**: It refers to the expenditure incurred by the government on the purchase of goods and services. The expenditure is determined by the government policy.
4. **Net Exports (X-M)**: It is the difference between exports and imports. It shows the effect of domestic investment on foreign goods and services (Imports) and foreign spending on domestic goods and services (Exports) on the level of AD.

2. What is the Consumption function?

Ans: The relation between consumption and income is called the consumption function. In terms of equation it is: \[ C = f(Y) \].

3. What is saving function?

Ans: The technical relationship between savings and income is called saving function. \[ S = f(Y) \].

The above diagram shows that as the level of income increases, consumption also increases but the increase in consumption is less than the increase in income.

3. What is the savings function?

Ans: The relation between savings and income is called the saving function. In terms of equation it is: \[ S = f(Y) \].

The diagram shows that there is a direct relationship between saving and level of income. As the level of income increase saving also increase. Saving is an increasing function of income.

Negative saving is nothing but dissaving, this means that at zero level of income there is dissaving of amount.

The following question carries 6 marks each.
1. Explain determination of national income based on AD and AS. Use diagram and table.

Ans: Equilibrium level of income is determined at that point when AD=AS.

Aggregate Demand: It represents the total expenditure on goods and services in an economy. AD consists of 1) Consumption expenditure. 2) Investment expenditure.

Thus, AD=C+I.

Aggregate Supply: It refers to the total production of goods and services in an economy. In other words, it refers to the country’s national income.

Thus AS=Y.

**Determination of equilibrium level of income.**

The equilibrium level of income is determined at a point when AD=AS. The following table and diagram illustrate the ideas:

<table>
<thead>
<tr>
<th>Income (Y)</th>
<th>Consumption (C)</th>
<th>Investment (I)</th>
<th>AD=C+I</th>
<th>AS=Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>50</td>
<td>100</td>
<td>150</td>
<td>0</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
<td>100</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>200</td>
<td>150</td>
<td>100</td>
<td>250</td>
<td>200</td>
</tr>
<tr>
<td><strong>300</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
<td><strong>300</strong></td>
<td><strong>300</strong></td>
</tr>
<tr>
<td>400</td>
<td>250</td>
<td>150</td>
<td>350</td>
<td>400</td>
</tr>
</tbody>
</table>

The above table & diagram shows that the equilibrium level of income is Rs. 300 crores because at this level of income AD(300) = AS(300).

**AD-AS & S-I Approach:**
1. Complete the following table:

<table>
<thead>
<tr>
<th>Y (in Rs)</th>
<th>C(in Rs)</th>
<th>S</th>
<th>MPS</th>
<th>APC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>1500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3000</td>
<td>2100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4000</td>
<td>2600</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ans:

<table>
<thead>
<tr>
<th>Y (in Rs)</th>
<th>C (in Rs)</th>
<th>S = Y-C</th>
<th>MPS = ΔS/ΔY</th>
<th>APC = C/Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>800</td>
<td>200</td>
<td>-</td>
<td>0.80</td>
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<tr>
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<td>0.70</td>
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<td>2600</td>
<td>1400</td>
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</tr>
</tbody>
</table>

The following question carries 3 marks each.

1. Why must planned savings of households be equal to planned investment of firms at the equilibrium level of income and output? Explain.

2. Explain the meaning of investment multiplier. What can be its minimum value and why?

3. Explain the meaning of equilibrium level of national income, with the help of a diagram.
The following question carries 4 marks each.

1. What is MPC? How is it related to MPS?
2. Explain with the help of a numerical example how an increase in investment in an economy affects its level of income.
3. Complete the table:

<table>
<thead>
<tr>
<th>Income (Y)</th>
<th>Consumption Expenditure (C)</th>
<th>MPC</th>
<th>MPS</th>
</tr>
</thead>
<tbody>
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<td>400</td>
<td>240</td>
<td></td>
<td></td>
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<tr>
<td>500</td>
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<td></td>
</tr>
<tr>
<td>700</td>
<td>465</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The following question carries 6 marks each.

1. Explain the concept of underemployment equilibrium with the help of a diagram. Show on the same diagram the additional investment expenditure require to full employment equilibrium.
2. Distinguish between APC & MPC. Draw a hypothetical propensity to consume curve and from it draw propensity to save curve.

### IMPORTANT FORMULAS

1. \( \text{MPC} = \frac{\Delta C}{\Delta Y} \)
2. \( \text{MPS} = \frac{\Delta S}{\Delta Y} \)
3. \( \text{APC} = \frac{C}{Y} \)
4. \( \text{APS} = \frac{S}{Y} \)
5. \( K = \frac{1}{1 - \text{MPC}} \)
6. \( K = \frac{1}{\text{MPS}} \)
7. \( \text{MPC} + \text{MPS} = 1 \)
8. \( \text{APC} + \text{APS} = 1 \)
9. \( K = \frac{\Delta Y}{\Delta I} \)
10. \( \text{AD} = C + I \)
11. \( \text{AS} = C + S \)

### UNIT IX: GOVERNMENT BUDGET & THE ECONOMY

MARKS: 8

Q.1 What is Govt. Budget?

Ans. A govt. budget is an annual statement of estimated receipts & expenditure of the govt. during a financial year.

Q.2 What are the Objectives of Govt. Budget?

Ans. The govt. prepares budget with the following objectives:

1. Proper Allocation of resources is one of the important objectives of govt. budget. The govt. makes a proper allocation of resources through its budgetary policy so as to make a balance between the goals of profit maximization & social welfare.

2. Economic Stability is another objective of budgetary policy of the govt. During the period of depression & inflation, govt. adopts the policy of deficit & surplus budgeting respectively.
3. Economic Growth is one of the important objectives of the govt. budget. Government prepares such a favorable budget which can create conducive conditions to raise the level of savings & investment on which the economic growth of a country depends.

4. Economic Equality is another important objective of govt. budget as economic disparity is inherent in any economic system which is politically & socially undesirable for a healthy nation.

5. Management of Public Enterprises has been also one of the objectives, so as to increase the growth of these enterprises as these are established in social interest in the form of natural monopolies where a single firm can produce at a lower average cost.

Q.3. Draw the structure of government budget?

Q.4 What are the two components of government budget?

Ans. The govt. budget consists of two parts viz. Revenue & Capital. Revenue component has no relation with the assets & liabilities position of the country, and it influences the current flow of goods & services. While, capital part of budget has large influence on the assets & liability of the country.

Receipts refer to estimated revenue of the govt. from various sources in a fiscal year. The receipts are classified as Revenue Receipts and Capital Receipts.

A. Revenue receipts refer to those money receipts which do not create any liability & do not reduce assets. These are non – redeemable receipts of the govt. The revenue receipts are further classified into Tax revenue receipts & Non –Tax revenue receipts.

I. Receipts from tax revenue comprise of the proceeds of taxes and duties levied by the govt. Tax are a compulsory payment made to the govt. irrespective of any direct benefit to the taxpayer. Tax is classified on the basis of burden as direct tax and indirect tax.

Direct tax is defined as the tax whose liability to pay & burden falls on the same person i.e. the tax burden cannot be shifted to other person or a group of person. Generally, direct taxes are levied on the property and income of persons. For example, Income tax, Gift tax, Corporation tax, Wealth tax, Expenditure tax, Estate duties etc.

Indirect tax is the tax whose impact of burden falls on one person and incidence falls on another person. Thus, there is a shifting of tax burden from one person to another person. For example, sales tax, excise duties, custom duties, entertainment tax etc. These taxes are generally levied on the goods & services but not on income or property of an individual or firm.
II. Receipts from Non - Tax Revenue: These are the receipts of the govt. from sources other than taxes. The non tax receipts are Dividends & Profits of the govt. enterprises; Interest Receipts; Receipts from Social, Economic, Fiscal & General Services; Fees, Licence & Permit; & Grants-in-Aid & other contributions.

Escheat refers to the income of the state which is received for such a property which has no claimant & the state alone has the legal right over it.

Fines & Penalties are those payments which are made by the individuals who violate the law, although the aim is not to earn revenue but to discourage crime & violation of law.

Gifts & Grants are also non tax receipts received by the govt. in the event of natural calamities, war etc.

A. Capital Receipts are those which create liability or reduce financial assets of the govt. These increase the liability of the govt. because these are to be paid back. These reduce the financial assets as the govt. has to repay by selling its shares or by the way of debentures. The capital receipts are classified as Borrowings, external Assistance, Disinvestment of Equity holdings in PSUs, Small Savings, Provident Funds and Other Receipts

B. Public Expenditure refers to the expenditure to be incurred on various heads during the fiscal year. Public Expenditure is been classified into Plan & Non-Plan expenditure since 1987-88 budget which are further classified into Revenue & Capital Expenditure. Further this Plan revenue & capital, and Non- Plan revenue & capital expenditure are classified into Developmental & Non-Developmental Expenditure. This can be understood by the help of the above flow chart.

Plan expenditure refers to the amount to be spent on the heads which are prescribed under the current five year plan. Thus it shows the central plan outlay for various projects, programmes & schemes & the central assistance for the state & union territories.

Plan Revenue expenditure includes the expenditure on central plans viz. agriculture, rural development, irrigation & flood control, energy, industry & minerals, transport, communication, science & technology, environment & others, and the central assistance for state and union territories.

Plan Capital Expenditure includes the expenditure on economic development, social & communal development, defence & general services etc., and loans to states and union territories for financing plan projects.

Non-Plan expenditure includes the expenditure on the items which are not included in the current five year plan but are included in the current fiscal year budget.

Non-Plan Revenue Expenditure includes interest payments; defence revenue expenditure; subsidies in food, sugar, export promotion, market development, interest subsidy etc; grants to states and UTs; pensions and economic services, social services, general services; postal deficit; grants to foreign govt. & others.

Non-Plan Capital Expenditure includes defence capital; loans to states, UTs & foreign govt.

Revenue expenditure includes the expenditure on those heads which do not create any assets or reduce the liabilities. These expenditures are incurred on the normal functioning of the govt. and the maintenance of the law & order. For example, compensation of employees, pensions, interest payments, subsidies, grants expenditure on central plans etc.

Capital expenditure refers to the amount to be spent on those heads which leads to the creation of the assets or reduction in liabilities. For example, expenditure on defence capital; purchase of assets viz. land, buildings & shares; loans to state govt. & union territories etc.

Developmental expenditure refers to the expenditure on those items which are directly related to economic and social development of the economy. For example, expenditure on capital assets, infrastructure, railways, posts, telecommunication, education, health, social welfare, scientific research etc. This expenditure directly contributes to the flow of goods and services.
Non-Developmental expenditure includes the expenditure on those heads which are not productive & give any returns to the economy viz. defence & administrations, natural calamity, interest payments, tax collections, old age pensions & unemployment allowances etc. Although, it does not contribute to the national income but it is not to be considered as unimportant as it lubricates the wheels of economic development i.e. it creates the conducive conditions in the functioning of the process of economic development.

Q.5 Define VAT.
Ans. Value Added Tax or VAT is an indirect tax which is levied on the Value Added by the firms at various stages of the production.

Q.6 What are the various types of Budget?
Ans. Govt. budget can be classified into Balanced, Surplus & Deficit Budget.

Balanced budget refers to the budget when the public receipts are equal to the public expenditure. In balanced budget, the government does not indulge in wasteful expenditure, and it ensures financial stability.

Surplus budget is the one in which public receipts exceeds the public expenditure. This kind of budget is adopted during the period of high rate of inflation, specially the demand – pull inflation. It acts as an effective tool to control the excess of aggregate demand as it helps in curtailing the excess purchasing power from the hands of the people.

Deficit budget is the one in which the govt. expenditure exceeds its receipts. This concept has its own relevance for different purposes. It acts as an important tool in the times of deflationary pressures. This kind of budget is generally adopted by the govs. of developing countries in order to induce the money supply in the society so as to create more employment & income opportunities.

Q.6 Define revenue deficit and suggest two measures to correct it.
Ans. Revenue deficit refers to the excess of revenue expenditure over revenue receipts. It is the difference between the (Plan revenue expenditure and Non-Plan revenue expenditure) and (Tax revenue + Non-tax revenue). This does not include items of capital receipts & capital expenditure.

The two measures to correct revenue deficit are:
1. To curtail unnecessary expenses by the Govt.
2. To raise the level of income by raising taxes & duties, improvement in the production capacity of PSUs.

Q.7 Define fiscal deficit.
Ans. Fiscal deficit refers to the excess of total expenditure over the sum of revenue receipts and capital receipts excluding borrowings. Thus, Fiscal Deficit = total Expenditure – Total Receipts (net of Borrowings).

Q.8 Define primary deficit and write measures to control it.
Ans. Primary Deficit is defined as fiscal deficit less interest payments. Thus, Primary Deficit = Fiscal Deficit – Interest Payments.

Measures:

Deficit Financing refers to the financing of the budgetary deficits. The sources are expansion in money supply

Curtailing or done away with the Government expenditure which are incurred to achieve political mileage by the political party can contain the budgetary deficits.

Raising Government receipts through taxation & disinvestment would also help in containing budgetary deficits.
Q.1 What is Balance of Payments?
Ans. It is a systematic record of all economic transactions between the residents of a country & rest of the world during a financial year. In other words, it is a summary record of all international economic transactions of a resident country with the rest of the world during a given period of time.

Q.2 What is Balance of Trade?
Ans. It refers to the systematic record of visible items in a financial year. In other words, it is the value of imports and exports of commodities i.e. merchandise. If the exports exceed imports, the BOT is said to be favourable, and unfavourable in case of vice versa. Thus, Favourable BOT = Exports receipts > Import payments.

Q.3 Write few differences between BOP & BOT.
Ans. The term ‘Balance of Payments’ refers to the account of both visible items & invisible items while ‘Balance of Trade’ refers to the record of visible items only. BOT is only one of the components of BOP while the BOP is a wider concept & therefore offers a more comprehensive picture of economic transactions of a country with the rest of the world. Moreover, the BOT may be balanced, deficit or surplus, while BOP as a whole always remain balanced. BOT is a simple statements related to the foreign trade of the country while BOP presents a classified record of all receipts on account of goods exported, services rendered and capital received, and payments made on account of goods imported, services rendered from, and capital transferred to abroad.

Q.4 What are the items included in BOP account?
1. Visible Items include all merchandise imports and exports i.e. the items which are recorded at the port & made of some material.
2. Invisible Items include receipts & payments for the services viz. shipping, banking, insurance, travel etc.; receipts and payments of income on foreign investments; interest on foreign loans & remittances of NRI’s etc; govt’s current expenditure in abroad viz. expenditure on embassies etc.; transfer payments & receipts.
3. Capital transfers include the capital receipts & capital expenditure of a resident country.

Q.5 Write about the structure of BOP.
Ans. BOP account is categorized into Current Account & Capital Account.
   - BOP on Current Account refers to transactions related to goods, services, income on investments & unilateral transfers. BOP on current account reveals the net income of the Other exchange rate regimes country generated in abroad. Both visible & invisible items constitute the current account of BOP. It need not always be in balance. It may show a surplus or deficit. It represents the difference between payments & receipts of currently produced & consumed goods & services. A deficit in current account indicates lowering down the level of income, creating problem of the payments to the foreigners & have adverse impact on country’s exchange reserves, & may increase external borrowings.
   - BOP on Capital Account: It refers to the international transactions in financial assets viz. bonds, equities, loans, bank account etc.; fixed plants & equipments, and direct investments. It is a record of those transactions which leads to change in assets or liability of the resident country. In other words, it is record of capital transactions i.e. the private & the official capital transfers as well as the banking capital flows. BOP on capital account deals with payments of debts and claims.

Q.6 Write few differences between BOP on current account & capital account.
Ans. The current account deals with the receipts & payments for those goods which are currently produced, while the capital account deals with debts & claims. Secondly, the BOP on current account has a direct influence on the level of income of a country, while the capital account influences the volume of assets of the country.

Q.7 What are other items which are included in the BOP?
Ans. There are certain items which do not form the part of current & capital account. These items are kept for balancing the BOP. These items are as follows:
   I. Errors & Omissions are the balancing items in the BOP accounts which are used for correcting the BOP as it is difficult to keep an accurate record of all the transactions which may be due to sample of transactions, dishonesty of traders, smuggling etc.
   II. Official Reserve Transactions refer to those transactions which are carried out by the govt.
Q.8 What do you mean by disequilibrium in the BOP?
Ans. It refers to such a situation when the BOP of the country is deficit or surplus. In other words, it is a situation when the net balance of all receipts & payments is not zero. If the net balance is in (+), it is surplus; while the negative (-) balance is deficit. In both of the situation, the BOP is in disequilibrium.

Q.9 What are the causes for disequilibrium in BOP?
Ans. Disequilibrium in BOP may be due to the following reasons:
Economic Factors viz. Cyclical fluctuations, huge public expenditure on development projects, hike in inflation which induces large imports of essential goods, development of import substitutes, change in cost structure of the trading partner countries etc; Demonstration effect which implies the effect of developed countries on the lifestyle & consumption pattern of the less developed countries which leads to rise in imports; Political instability which may lead to large scale capital outflow; Social factors viz. changes in the social structure & norms which may affect the propensity to consume, comforts & exports; etc.

Q.10 What are the measures to correct adverse BOP?
Ans. Dear money policy, depreciation of the external value of domestic currency, devaluation of the currency, exchange control restrictions, tariff & import duties, fixing of import quotas, export promotion measures, import substitution etc.

FOREIGN EXCHANGE RATE

Q.1 Define foreign exchange rate system.
Ans. Foreign Exchange Rate refers to the rate at which one unit of currency of a country is exchanged for the currency of other country. In other words, it is the price of one currency in terms of another currency.

Q.2 What are the methods for determination of Exchange Rate?
Ans. The exchange rate is the price of a currency in terms of another currency. It depends upon the different foreign exchange regimes which are Fixed Exchange Rate System & Flexible Exchange Rate System.

Fixed Exchange Rate System refers to the system in which the rate of exchange is determined by govt. or monetary authorities. It can be classified into Gold Standard System or Mint Parity of Exchange & Adjustable Peg System. The Gold Standard System refers to the system in which exchange rate is determined on the basis of gold contents of the two currencies. This system has been prevailing under the gold standard (1880-1914).
This system of exchange rate represents the fixed ratio between the two currencies based on the gold contents. Adjustable Peg System is also called as Bretton Woods System which came into existence after the failure of gold standard system. This system has been in existence during the period 1945 to 1971. Under this system, the US dollar was made directly convertible into gold at a fixed price & the member countries of IMF were required to fix the par values of their currencies in terms of gold or dollar & maintain it. Under this system, the exchange rates were more or less fixed but the peg could be adjusted if any disequilibrium appears in the BOP.
Flexible Exchange Rate System refers to such a rate of exchange which is determined by the demand for & supply of the foreign exchange in the foreign exchange market. Under this system, the govt. or central bank does not intervene in the determination of exchange rates. The exchange rate is determined by the free play of two forces viz. demand & supply of concerned foreign currencies. The rate of exchange is determined when both demand & supply of foreign exchange are equal to each other.

Q.2 What are the Sources of Demand for foreign exchange?
Ans. Import of goods & services; investment in other countries; gifts & grants to abroad; direct purchase made in abroad; other payments involved in international transactions etc. The demand for foreign exchange is made for the purpose of payments of foreign loans, import of products, making investments & giving loans to other countries, tour & travel in abroad etc. The demand for foreign exchange is inversely related to the exchange rate.

Q.3 What are the Sources of Supply of foreign exchange?
Ans. the export of goods & services; investments by ROW in the resident country; receiving gifts, donations & grants from the ROW; remittances by the non-residents from the ROW; direct purchase made by the non-residents in the domestic country; other receipts involved in international transactions etc. The supply of foreign exchange is directly related to the exchange rate.
Equilibrium rate of exchange refers to the rate at which demand for & supply of foreign exchange is equal to each other.

Q.3 What are the Other exchange rate regime?
Ans.Wider Bands It was realized that this variation is too narrow & therefore it has been widened to 10% variation around the parity to correct disequilibrium in the BOP. Incase of deficit in BOP, a country can depreciate its currency up to 10% so as to increase demand for its product, & thus raise the export earnings
Crawling Peg System allows a small variation around ±1% from parity & the parity rate is also adjusted regularly by small amounts. This adjustment depends upon on the position of forexres, variations in forex rate, & changes in prices etc.

Managed Floating is the system in which exchange rate is not completely free, rather it is managed by the monetary authority of the country in the best interest of the nation. This system has to follow certain guidelines. When this system is followed without any set of rules & regulations, it is termed as “dirty floating”.

Q.4 What are types of Foreign Exchange Market?

Ans. (1) Spot exchange market refers to the market where foreign exchange is bought & sold on the spot, and the rate of exchange is determined on the spot. It is of daily nature & the rate of exchange happens to prevail at the time of transaction. The spot exchange rate can be of four types:

(i) Nominal Effective Exchange Rate (NEER) is the one when the effect of price change is not eliminated. It does not take into account the changes in the price level for measuring the average strength of domestic currency in terms of other.

(ii) Real Exchange Rate refers to the one in which the effect of price change is eliminated, & the rate of exchange is calculated on the basis of constant prices.

(iii) Real Effective Exchange Rate is the one in which the Effective Exchange Rate (EER) is calculated on the basis of real exchange rates instead of nominal rates.

(iv) Purchasing Power Parity Rate is the one in which the rate of exchange is determined by the purchasing powers of the two currencies. There are two versions for it viz. absolute & relative versions. Absolute PPP states that the exchange rate is determined by the ratio of the internal purchasing power (price levels) of the two countries. Thus, \( R = \frac{P_x}{P_y} \), where \( P_x \) & \( P_y \) refers to the Price Level of two countries X & Y. Relative PPP states that change in equilibrium rate of exchange is determined by the change in the ratio of their respective purchasing power (rates of inflation).

(2) Forward Exchange Market refers to the one where agreements are reached for the delivery of foreign currency at some future date at the rate agreed at the time of agreement. The Forward exchange rate is determined at the time of sale but the payment is made when the exchange is delivered. This kind of transaction is made to avoid the risk of adverse change in exchange rate, & to make speculative gains.